

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

5. Lease Designation and Serial No.

ML 28293

6. If Indian, Allottee or Tribe Name

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work

DRILL ☒DEEPEN ☐PLUG BACK ☐

b. Type of Well

Oil
Well ☒Gas
Well ☐

Other

Single
Zone ☐Multiple
Zone ☐

2. Name of Operator

MEGADON ENTERPRISES, INC.

3. Address of Operator

Ste. 253, 57 West South Temple, Salt Lake City, Utah

4. Location of Well (Report location clearly and in accordance with any State requirements.)*

At surface

NWNW. SECTION 36, T 21 S, R 14E, SLM.

At proposed prod. zone 660' FR. N-LINE AND 660' FR. W-LINE

7. Unit Agreement Name

SALERATUS

8. Farm or Lease Name

FEDERAL

9. Well No.

STATE #2-36

10. Field and Pool, or Wildcat

WILDCAT

11. Sec., T., R., M., or Blk.
and Survey or AreaNW.NW. SEC. 36-21S-14E
SLM.

12. County or Parrish

EMERY

13. State

UTAH

14. Distance in miles and direction from nearest town or post office*

APPROXIMATELY 10 MILES SW. OF GREEN RIVER, UTAH

15. Distance from proposed*

location to nearest
property or lease line, ft.

(Also to nearest drlg. line, if any)

600'

16. No. of acres in lease

17. No. of acres assigned
to this well

160 ACRES

18. Distance from proposed location*
to nearest well, drilling, completed,
or applied for, on this lease, ft.MORE THAN TWO
MILES

19. Proposed depth

9500

20. Rotary or cable tools

ROTARY

21. Elevations (Show whether DF, RT, GR, etc.)

4485 GRD; 4503' K.B.

22. Approx. date work will start*

SEPT. 1, 1981

23.

PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
12 1/4"	9 5/8"	36.00#	2800'	600 sks
8 3/4"	5 1/2"	23.00#	9500'	Approx. 1200 sks

IT IS PLANNED TO DRILL A WELL AT THE ABOVE LOCATION TO TEST THE OIL AND GAS PRODUCTIVE POSSIBILITIES OF THE MISSISSIPPIAN-LEADVILLE FORMATION AT A DEPTH OF APPROXIMATELY 8300' AND ALL OTHER FORMATIONS ABOVE THIS DEPTH. THE WELL WILL BE DRILLED WITH ROTARY TOOLS USING MUD-AIR-MUD, IN THAT SEQUENCE, FOR CIRCULATION. IT IS PLANNED TO SET ONE JOINT OF 13 3/8" CASING FOR A CONDUCTOR PIPE AND TO SET THE SURFACE CASING, 8 5/8", THRU THE WINGATE FORMATION WHICH IS KNOWN TO HAVE FRESH WATER IN THIS AREA. A BLOWOUT PREVENTER AND HYDRIL, WHICH IS HYDRAULICALLY OPERATED, WILL BE MOUNTED ON TOP OF THE 13 3/8" CASING HEAD FOR WELL CONTROL. IN THE EVENT OF PRODUCTION, 4 1/2" or 5 1/2" CASING WILL BE SET AND CEMENTED TO A POINT WHICH IS 200' ABOVE THE TOP OF THE SALT. SEE ATTACHED PROGNOSIS FOR DETAILS.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

Signed

Title

PRESIDENT

Date

AUG. 25, 1981

(This space for Federal or State office use)

Permit No.

Approval Date

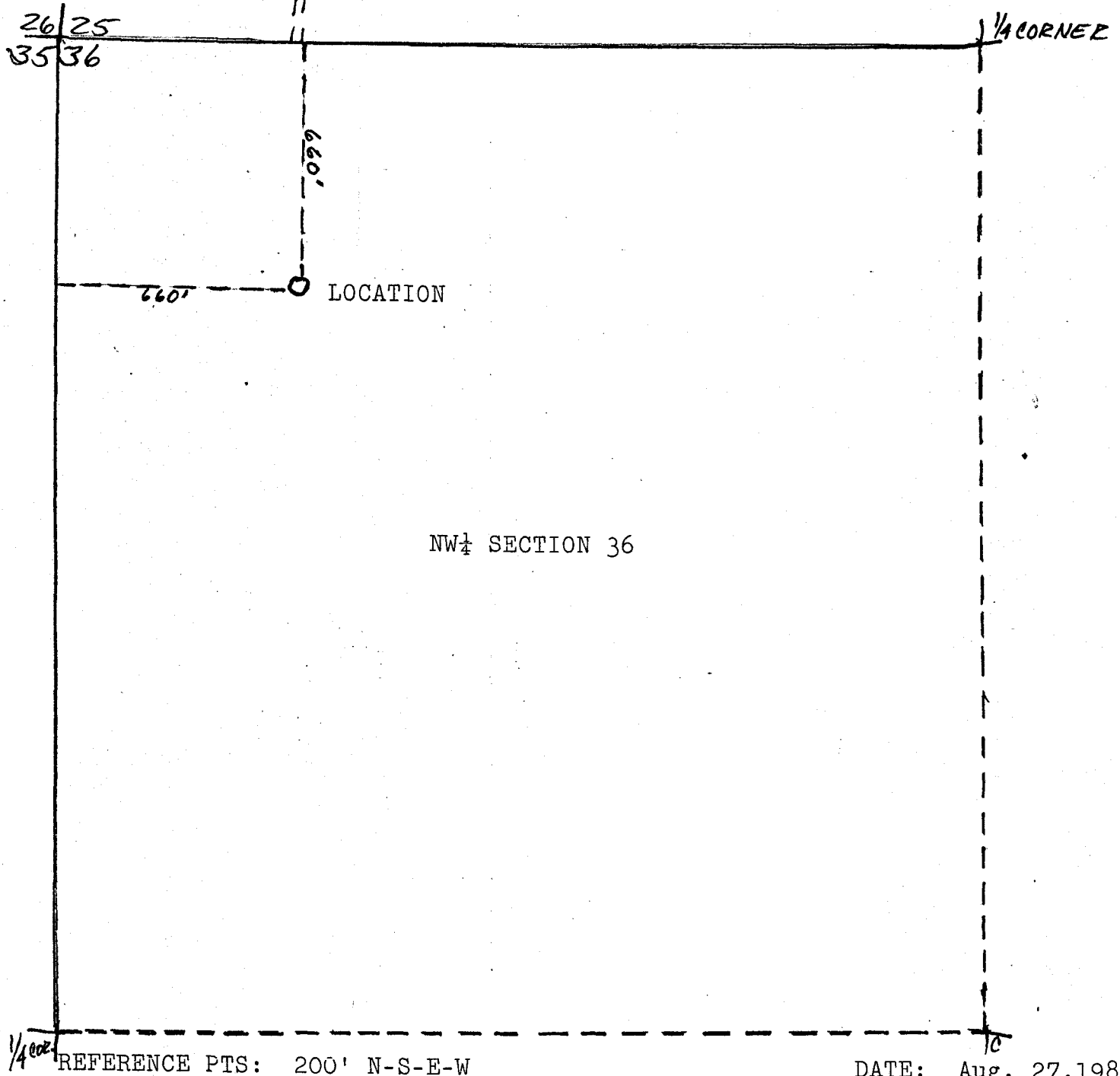
Approved by

Title

Conditions of approval, if any:

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 9/15/81
BY: [Signature]

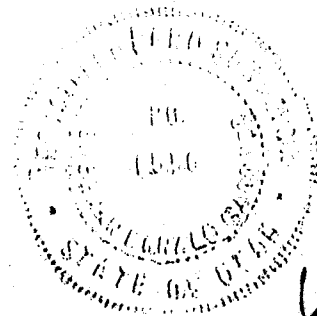
LOCATION PLAT FOR
MEGADON ENTERPRISES, INC.
STATE #2-36 WELL
NW. NW. SECTION 36-21S-14E.
EMERY COUNTY, UTAH
660' FR. N-LINE & 660' FR. W-LINE
ELEVATION: 4485' GRD.



I, Sherman D. Gardner, do hereby certify that this plot was plotted from notes of a field survey made under my direct responsibility, supervision, and checking on

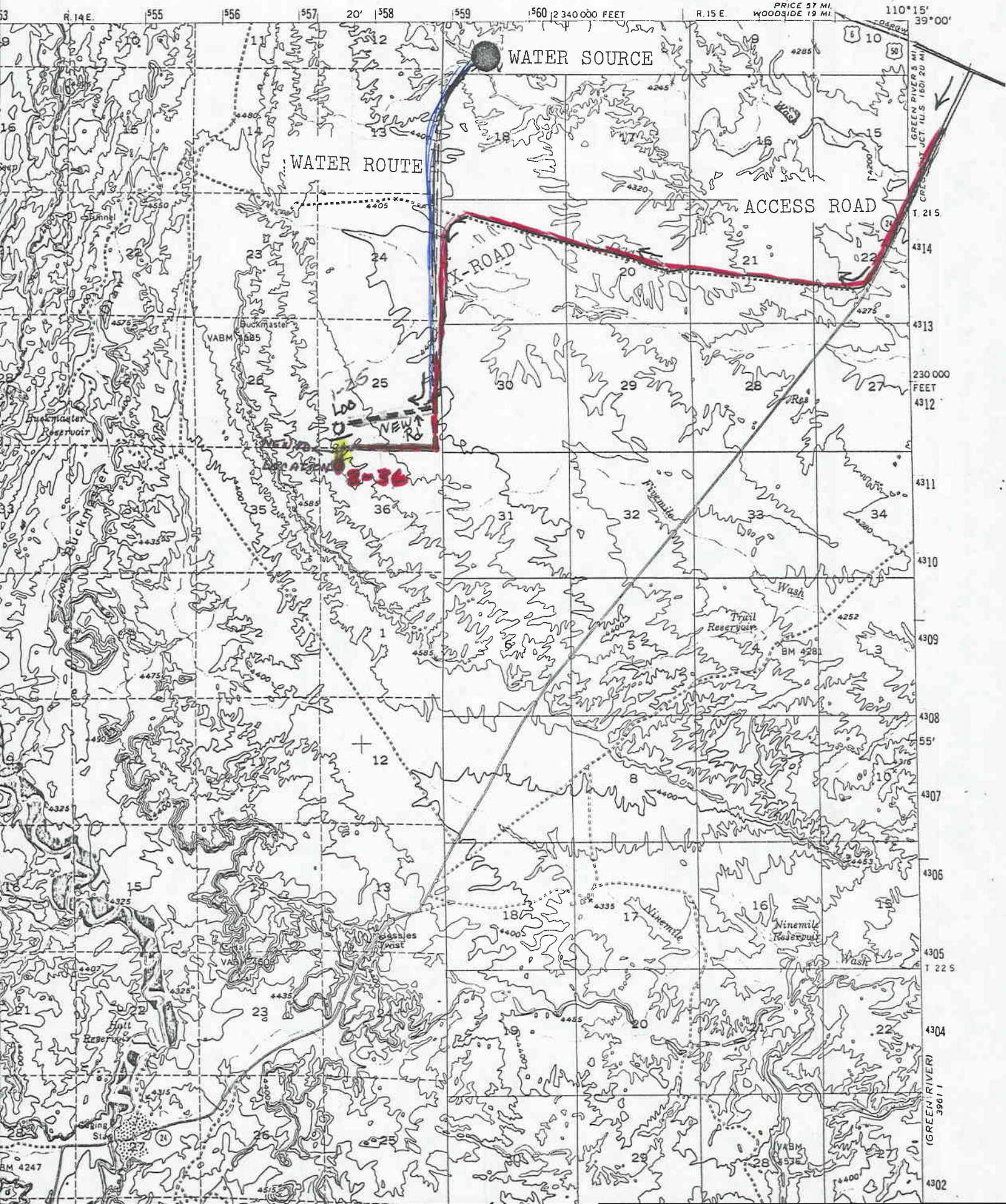
Sherman D. Gardner
Registered Land Surveyor
State of Utah #1556

DATE: Aug. 27, 1981
SCALE: 1" = 400'



Plat #1

TIDWELL BOTTOMS QUADRANGLE
UTAH-EMERY CO.
15 MINUTE SERIES (TOPOGRAPHIC)



DESIGNATION OF OPERATOR

The undersigned is, on the records of the Bureau of Land Management, holder of lease

DISTRICT LAND OFFICE: Utah State Lands
SERIAL NO.: ML-28293

and hereby designates

NAME: MEGADON ENTERPRISES, INC.
ADDRESS: 57 West South Temple, Salt Lake City, Utah 84101

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable):

Township 21 South, Range 14 East, S.L.M.
Section 36: NW $\frac{1}{4}$

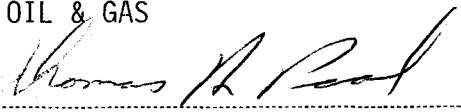
It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

POOL OIL & GAS

By


(Signature of lessee)
Thomas A. Pool, General Partner

309 Guaranty Bank Bldg., 817 17th Street
Denver, Colorado 80202

(Address)

September 16, 1981

(Date)

**** FILE NOTATIONS ****

DATE: September 2, 1981

OPERATOR: Megadon Enterprises, Inc.

WELL NO: Laloratus Federal State #2-36

Location: Sec. 36 T. 21S R. 14E County: Emery

File Prepared: ☒

Entered on N.I.D: ☒

Card Indexed: ☒

Completion Sheet: ☒

API Number 43-015-30089

CHECKED BY:

Petroleum Engineer: _____

Check for bond.

Director: OK as per Rule C-3

Administrative Aide: OK as per Rule C-3

APPROVAL LETTER:

Bond Required: ☒

Survey Plat Required: ☐

Order No. _____

O.K. Rule C-3 ☐

Rule C-3(c), Topographic Exception - company owns or controls acreage within a 660' radius of proposed site ☐

Lease Designation St.

Plotted on Map ☐

Approval Letter Written ☐

Hot Line ☒

P.I. ☒

September 28, 1981

Megadon Enterprises, Inc.
STE. #253, 57 West South Temple
Salt Lake City, Utah 84101

RE: Well No. Saleratus Federal State #2-36,
Sec. 36, T. 21S, R. 14E,
Emery County, Utah

Insofar as this office is concerned, approval to drill the above referred to oil well is hereby granted in accordance with Rule C-3, General Rules and Regulations and Rules of Practice and Procedure.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

MICHAEL T. MINDER - Petroleum Engineer
Office: 533-5771
Home: 876-3001

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling. Your cooperation in completing this form will be appreciated.

Further, it is requested that this Division be notified with in 24 hours after drilling operations commence, and that the drilling contractor and rig number be identified.

The API number assigned to this well is 43-015-30889.

Sincerely,

DIVISION OF OIL, GAS AND MINING

Cleon B. Feight
Director

CBF/db
CC: State Lands

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

SUBMIT TRIPLICATE*
(Other instructions on
reverse side)

State

OK

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. <input type="checkbox"/> OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER 2. NAME OF OPERATOR MEGADON ENTERPRISES INC. 3. ADDRESS OF OPERATOR 57 WEST SOUTH TEMPLE, SALT LAKE CITY, UTAH 84101 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface NW.NW. SECTION 36, T 21S, R 14E, SLM 660' FR. N-LINE AND 660' FR. W-LINE		5. LEASE DESIGNATION AND SERIAL NO. ML-28293 6. IF INDIAN, ALLOTTEE OR TRIBE NAME 7. UNIT AGREEMENT NAME SALERATUS 8. FARM OR LEASE NAME STATE 9. WELL NO. STATE #2-36 10. FIELD AND POOL, OR WILDCAT 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA 12. COUNTY OR PARISH 13. STATE EMERY UTAH
14. PERMIT NO.	15. ELEVATIONS (Show whether DF, RT, GR, etc.) 4485' GRD; 4503' K.B.	

16.

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

WATER SHUT-OFF

REPAIRING WELL

FRACTURE TREAT

MULTIPLE COMPLETE

FRACTURE TREATMENT

ALTERING CASING

SHOOT OR ACIDIZE

ABANDON*

SHOOTING OR ACIDIZING

ABANDONMENT*

REPAIR WELL

CHANGE PLANS

(Other) INFORMATION

(Other)

(Note: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

THE SUBJECT WELL WAS SPUDDED IN ON SEPTEMBER 30, 1981. A 12 1/4" HOLE WAS DRILLED TO A DEPTH OF 20' AS OF MIDNIGHT ON SEPTEMBER 30, 1981. 38' OF 13 3/8" CSG WAS SET AND THOROUGHLY CEMENTED TO THE SURFACE AS A CONDUCTOR PIPE. THE HOLE FOR THIS CONDUCTOR PIPE WAS DRILLED BY PATTERSON DRILLING COMPANY'S RIG #1. REPUBLIC DRILLING CO.'S RIG #9 HAS NOW BEEN MOVED ON TO THE LOCATION AND A 12 1/4" HOLE HAS BEEN DRILLED TO A DEPTH OF 538' AT THE PRESENT TIME. 9 5/8" SURFACE CASING WILL BE SET TO 2800' WHICH WILL BE THRU THE MASSIVE FRESH WATER SANDS.

RECEIVED

OCT 08 1981

DIVISION OF
OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNATURE

TITLE

SECRETARY/TREASURER

DATE

OCT. 6, 1981

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

SUBMIT IN TRIPLICATE*
(Other instructions on
reverse side)

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER DRY HOLE <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. ML-28293
2. NAME OF OPERATOR MEGADON ENTERPRISES INC.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
3. ADDRESS OF OPERATOR 57 WEST SOUTH TEMPLE, SALT LAKE CITY, UTAH 84101		7. UNIT AGREEMENT NAME SALERATUS
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface NW $\frac{1}{4}$ NW $\frac{1}{4}$ SECTION 36, T 21S, R 14E, SLM 660' FR. N-LINE AND 660' FR. W-LINE		8. FARM OR LEASE NAME STATE 9. WELL NO. #236
14. PERMIT NO. 43-015-30089		10. FIELD AND POOL, OR WILDCAT WILDCAT
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 4485' Grd; 4503' K.B.		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA NW.NW. SEC. 36-21S-14E. SLM.
12. COUNTY OR PARISH EMERY		13. STATE UTAH

16.

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>
(Other) <input type="checkbox"/>	

SUBSEQUENT REPORT OF:

WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING* <input type="checkbox"/>
SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input checked="" type="checkbox"/>
(Other) <input type="checkbox"/>	

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

THE SUBJECT WELL WAS DRILLED TO A TOTAL DEPTH OF 9184' WHICH WAS ABOUT 21' BELOW THE TOP OF THE BOWMAN-HARTMAN (CAMBRIAN) FORMATION. NO COMMERCIAL DEPOSITS OF HYDROCARBONS WERE ENCOUNTERED IN THIS WELL SO IT WAS PLUGGED AND ABANDONED ON DECEMBER 24, 1981 AS FOLLOWS:

PLUG #1: 9100' to 8950' (150') - 60 sks - across top of McCracken
 PLUG #2: 8400' to 8250' (150') - 60 sks - across top of Leadville
 PLUG #3: 7750' to 7600' (150') - 100 sks - Base of salt
 PLUG #4: 6600' to 6450' (150') - 75 sks - Top of salt
 PLUG #5: 4350' to 4200' (150') - 60 sks - Top of Coconino
 PLUG #6: 3000' to 2900' (100') - 50 sks - Bottom of casing

10 sks cement with marker at surface.

LOCATION WILL BE CLEANED AND LEVELLED AND FENCE BUILT ON FOURTH SIDE OF PIT UNTIL MUD IS EVAPORATED.

18. I hereby certify that the foregoing is true and correct

SIGNED W. Dan Gudey TITLE PRESIDENT

DATE 12-29-81

(This space for Federal or State office use)

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

DATE _____

DIVISION OF OIL, GAS AND MINING

PLUGGING PROGRAM

NAME OF COMPANY: Megadon Enterprises Inc. Don Quigley

WELL NAME: Saleratus 2-36

SECTION 36 TOWNSHIP 21S RANGE 14E COUNTY Emery

VERBAL APPROVAL GIVEN TO PLUG AND ABOVE REFERRED TO WELL IN THE FOLLOWING MANNER:

TOTAL DEPTH: 9184'

CASING PROGRAM:

9 5/8 " @ 2965 cemented top to bottom
13 3/8" @ 40' conductor cemented top
to bottom

FORMATION TOPS:

Moenkopi	3205'
Kiabab	4050'
Coconino	4236'
Cutler Ruco	4808'
Oquirrh	5016'
Hermosa	5550'
Salt	6570'
Pinkerton Trail	7770'
Molas	8198'
Mississippian Leadville	8235'
Ouray	8745'
Elbert	8920'
McCracken	9100'
Bowman-Hartman	9150'

PLUGS SET AS FOLLOWS:

McCracken	9100 - 8950'	60 sax (150')
Mississippi	8400 - 8250'	60 sax (150')
Base of salt	7750 - 7600'	100 sax (150')
Top of salt	6600 - 6450'	75 sax (150')
Top Coconino	4350 - 4200'	60 sax (150')
Bottom of casing	3000 - 2900'	50 sax
10 sax top with marker		
10.6 mud between plugs		
38 vis. 8 water toss		

The interval between plugs shall be filled with a 9.2#, 50 vis. fresh water gel based mud; erect regulation dryhole marker; clean up, grade and restore the location; and notify this Division when the location is prepared for inspection.

DATE December 24, 1981 SIGNED C.B. Feight



STATE OF UTAH
NATURAL RESOURCES & ENERGY
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Cleon B. Feight, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

January 15, 1982

Megadon Enterprises, Inc.
57 South Temple
Salt Lake City, Utah 84101

Re: Well No. Saleratus Federal State #2-36
Sec. 36, T. 21S, R. 14E
Emery County, Utah

Gentlemen:

This letter is to advise you that the Well Completion or Recompletion Report and Log for the above mentioned well is due and has not been filed with this office as required by our rules and regulations.

Please complete the enclosed Form OGC-3, in duplicate, and also all drilling information on this well is needed to be forwarded to this office as soon as possible.

Thank you for your cooperation relative to the above.

Very truly yours,

DIVISION OF OIL, GAS AND MINING

Cari Furse
Clerk Typist

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

5. LEASE DESIGNATION AND SERIAL NO.

ML 28293

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

SALERATUS

8. FARM OR LEASE NAME

STATE

9. WELL NO.

SALERATUS #2-36

10. FIELD AND POOL, OR WILDCAT

WILDCAT

11. SEC., T., R., M., OR BLOCK AND SURVEY
OR AREANW. NW. SEC. 36-21S-14E.
SLM.12. COUNTY OR
PARISH
EMERY13. STATE
UTAH

1a. TYPE OF WELL:

OIL
WELL ☐GAS
WELL ☐DRY ☒

Other _____

b. TYPE OF COMPLETION:

NEW
WELL ☐WORK
OVER ☐DEEP-
EN ☐PLUG
BACK ☐DIFF.
RESVR. ☐

Other _____

2. NAME OF OPERATOR

MEGADON ENTERPRISES INC.

3. ADDRESS OF OPERATOR

STE 240, 57 WEST SOUTH TEMPLE, SALT LAKE CITY, UTAH

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface NW¼ NW¼ SECTION 36, T 21S, R 14E, SLM

At top prod. interval reported below 660' FR. W-LINE & 660' FR. N-LINE

At total depth

14. PERMIT NO.

DATE ISSUED

430530089

15. DATE SPUNDED

9-30-81

16. DATE T.D. REACHED

12-23-81

17. DATE COMPL. (Ready to prod.)

n/a

18. ELEVATIONS (OF, RKB, RT, OR, ETC.)*

4485' grd; 4498' K.B.

19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD

9184'

21. PLUG, BACK T.D., MD & TVD

22. IF MULTIPLE

HOW MANY*

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND

NONE

26. TYPE ELECTRIC AND OTHER LOGS RUN

DUAL LATEROLOG, GAMMA-DENSITY-CNL

27. WAS WELL CORED

NO

23.

CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	AMOUNT PULLED
13 3/8"	48.00#	40'	17 1/2"	None
9 5/8"	36 & 40#	2965'	12 1/4"	None
			8 1/2"	

29.

LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (Interval, size and number)

NONE

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
NONE	

33.*

PRODUCTION

DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)				WELL STATUS (Producing or shut-in)	
NONE						D & A	
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
NONE			→				
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
		→					

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS

DRILLING HISTORY & GEOLOGIC REPORT & SAMPLE LOG

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

H. Don Quigley

TITLE

PRESIDENT

DATE

JAN 15, 1982

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments **Items 22 and 24:** If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES: SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF: CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES				38. GEOLOGIC MARKERS			
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH	TOP	TRUE VERT. DEPTH
MANCOS	SURFACE	216'	Black marine shale				
DAKOTA	216'	440'	Sandstone, light gray shale and siltstone				
MORRISON	440'	900'	Sandstone, red shale & siltstone				
ENTRADA	900'	1190'	Sandstone & Siltstone				
CARMEL	1190'	1595'	Red shale, siltstone, and ss.				
NAVAJO	1595'	2130'	Reddish to tan ss.				
KAYENTA	2130'	2165'	Siltstone				
WINGATE	2165'	2710'	Sandstone				
CHINLE	2710'	3205'	Sandstone and shale				
MOENKOPI	3205'	4058'	Shale and siltstone				
KAIBAB	4058'	4236'	Cherty limestone, micaceous shale				
COCONINO	4236'	4808'	Sandstone, hard, white, abrasive				
CUTLER RICO	4808'	5016'	Shale, ss., and limestone				
OQUIRRH	5016'	5550'	Limestone and shale				
HERMOSA	5550'	6570'	Limestone, dolomite, anhydrite				
SALT	6570'	7770'	Salt, black shale, anhydrite and dolomite				
PINK. TRAIL	7770'	8198'	Anhydrite, limestone, shale				
MOLAS	8198'	8235'	Soft red shale, blk shale, and dolomite				
LEADVILLE	8235'	8740'	Limestone, chalky, and sucrosic dolomite				
OURAY	8740'	8910'	Cherty dolomite				
ELBERT	8910'	9100'	Red shale, gray shale, dolomite				
MCCRACKEN	9100'	9150'	Quartzitic ss.				
LYNCH OR BOWMAN	HARTMAN	9150'	T.D. Siliceous dolomite and red and gray siltstone				

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 19: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments. **Items 22 and 24:** If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:

SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF: CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	GEOLOGIC MARKERS	
				SS.	NAME
MANCOS	SURFACE	216'	Black marine shale		
DAKOTA	216'	440'	Sandstone, light gray shale and siltstone		stone
MORRISON	440'	900'	Sandstone, red shale & siltstone		
ENTRADA	900'	1190'	Sandstone & Siltstone		
CARMEL	1190'	1595'	Red shale, siltstone, and ss.		
NAVAJO	1595'	2130'	Reddish to tan ss.		
KAYENTA	2130'	2165'	Siltstone		
WINGATE	2165'	2710'	Sandstone		
CHINLE	2710'	3205'	Shale and siltstone		
MOENKOPI	3205'	4058'	Shale and siltstone		
KAIBAB	4058'	4236'	Cherty limestone, micaceous shale		
COCONINO	4236'	4808'	Sandstone, hard, white, abrasive		
CUTLER RICO	4808'	5016'	Shale, ss., and limestone		
OQUIRHU	5016'	5550'	Limestone and shale		
HERMOSA	5550'	6570'	Limestone, dolomite, anhydrite		
SALT	6570'	7770'	Salt, black shale, anhydrite and dolomite		
PINK. TRAIL	7770'	8198'	Anhydrite, limestone, shale		
MOLAS	8198'	8235'	Soft red shale, blk shale, and dolomite		
LEADVILLE	8235'	8740'	Limestone, chalky, and sucrosic dolomite		
OURAY	8740'	8910'	Cherty dolomite		
ELBERT	8910'	9100'	Red shale, gray shale, dolomite		
MCCRACKEN	9100'	9150'	Quartzitic ss.		
LYNCH OR BONMAN HARTMAN	9150'	T.D.	Siliceous dolomite and red and gray siltstone		

• LYNCH OR BONMAN HARTMAN 9150' T.D.

DRILLING HISTORY
AND
GEOLOGIC EVALUATION
OF
SALERATUS #2-36 WELL
EMERY COUNTY, UTAH

OPERATOR: Megadon Enterprises, Inc.
Suite 240, 57 West South Temple
Salt Lake City, Utah 84101

CONTRACTOR: Republic Drilling & Service Co.
Three Riverway, Suite 1770
Houston, Texas 77056

LOCATION: NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 36, T 21S, R 14E, SLM, Emery County,
Utah (660' from W-line and 660' from N-line)

ELEVATIONS: 4485' Grd; 4503' K.B.

SPUDDED-IN: September 30, 1981

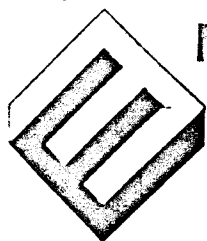
DATE FINISHED DRLG: December 23, 1981

TOTAL DEPTH: 9184'

SURFACE CASING: 9 5/8", 36.00# & 40.00#, K-55 casing set at 2965'
K.B. and cemented w/500 sks reg cement and cemented
top w/30 more sks cement.

LOWEST FORMATION PENETRATED: Bowman-Hartman (Cambrian)

DATE PLUGGED & ABANDONED: December 24, 1981



MEGADON ENTERPRISES, INC.

309 Guaranty Bank Building • 817 17th St. • Denver, Colorado 80202 • (303) 573-0093
57 West South Temple • Salt Lake City, Utah 84101 • (801) 359-3575

DRILLING HISTORY ON SALERATUS #2-36 WELL NW. NW. SECTION 36-20S-14E. EMERY COUNTY, UTAH

- OCT. 4-6: Moving in and rigging up Republic Drlg. Co. Rig #9. Drilled to a depth of 538'. Wt. on bit is 15,25,000# at 90 RPM. Drilling with water. Made a deviation survey at 294' = $\frac{1}{2}^{\circ}$.
- OCT. 7: Drilled 538' to 769' (169') in 15 hrs. Wt. on bit is 20,000# at 90 RPM. Accumulative cost including rig move is \$61,900.
- OCT. 8: Drilled 769' to 931' (162') in 23 $\frac{3}{4}$ hrs. Drlg at avg. rate of 8.7 ft/hr, Wt. on bit is 20-40,000# at 160 RPM. Bit #1 made 498' in 38 $\frac{1}{4}$ hrs. (12 $\frac{1}{4}$ " Security Bit). PSM is 100 at 200#. Deviation survey at 844' was $\frac{3}{4}^{\circ}$.
- OCT. 9: Drilled 931' to 1106' (175') in 20 $\frac{1}{4}$ hrs. Drlg at avg. rate of 8.16 ft/hr. Made a rd-trip for new bit. Bit #2 (Security M4M) drld 445' in 58 hrs. (7.67'/hr). Wt. on bit is 20-40,000# at 90 RPM. Deviation survey at 988' was $\frac{3}{4}^{\circ}$. Accumulative cost is \$84,450.
- OCT. 10: Drilled 1106' to 1357' (251') in 23 $\frac{3}{4}$ hrs. Wt. on bit is 30,000# at 60 RPM. Drilling with fresh water with gel sweep. Pump pressure is 400 psi.
- OCT. 11: Drilled 1357' to 1600' (243') in 23 hrs. Drlg at avg. rate of 10.6'/hr. Made rd-trip for new bit. Bit #3 (Smith F-2 RR) made 492' in 49 $\frac{1}{2}$ hrs. Wt. on bit is 30,000# at 60 RPM.
- OCT. 12: Drilled 1600' to 1847' (247') in 23 $\frac{1}{4}$ hrs. Drlg at rate of 10.1 ft/hr. Wt. on bit is the same. PSM is 110 at 450 psi. Deviation survey at 1574' was 2 $\frac{3}{4}^{\circ}$. Accumulative cost is \$116,750.
- OCT. 13: Drilled 1847' to 2147' (300') in 23.25 hrs. Survey at 1827' was 2 $\frac{1}{2}$ and at 2132' was 2°. Drlg at avg. rate of 13 ft/hr with 20,000# on bit at 65 RPM. Drilling with water. Pump pressure is 750# at 75 SPM. Est. top of Kayenta at 2065'. Drilling mostly in tan, c.g. sand of Navajo.

SALERATUS #2-36 WELL
DRILLING HISTORY

- Dec. 20: Drilled 8827' to 8950' (123'). Finished trip in hole. Reamed 45' to bottom. Began drlg ahead at 0145 hrs. Drlg at rate of 5.7 ft/hr. in sucrosic dolomite. Suspect top of Elbert at 8914'. Drlg w/23,000# on bit at 60 RPM. Pump pressure at 1750# at 140 SPM. Mud wt. is 10.5, Visc. is 38, W.L. is 3. Oil content is a trace and chlorides down to 130,000 ppm.
- Dec. 21: Drilled 8950' to 9030' (80'). Survey at 9030' was 2°. Drlg at rate of 5.6 ft/hr in sucrosic dolomite to 9012' and then decreased to 2.5 ft/hr. in Xln dk brn dolomite and soft red shale. Decided to pull bit at 1900 hrs so came out of hole. (Found one cone on bit loose and several buttons gone.) Put on new bit with junk sub and went back in hole. Dolomite has scattered yellow fluorescence.
- Dec. 22: Drilled 9030' to 9109' (79'). Drlg in chty gry lms. w/some gry and grn shale, at rate of about 4 ft/hr. Had a slight drlg break at 9100' and began gettin clr quartzite in samples. (Probable top of McCracken at 9100'.) Drlg with same wt. on bit and pump pressure. Mud valves about the same. (Mud is carrying about 1½% to 2% oil.)
- Dec. 23: Drilled 9109' to 9184' (75'). McCracken was quartzitic and tight. Had 14 units gas - yellow fluorescences - no stain. No cut - looks wet or tight. Had pink calcareous limestone, dolomite and silicious gry shale at 9160' - probable top of Cambrian - Bowman Hartmen formation. Decided to quit drilling at 9184'. Called participants and decided no to log bottom 750' of hole (Est cost at \$20,000). Circulated for 2½ hrs and started out of hole.
- Dec. 24: Came out of hole with drill stem. Laid down collars. Cut off drilling line. Went back in hole with drill pipe - open ended. Participants decided to plug well. Placed cement plugs in hole as follows:

Plug #1: 9100-8950' (150') 60 sks - across top of McCracken
Plug #2: 8400-8250' (150') 60 sks - across top of Miss-Leadville
Plug #3: 7750-7600' (150') 100 sks - across base of salt
Plug #4: 6600-6450' (150') 75 sks - across top of salt
Plug #5: 4350-4200' (150') 60 sks - across top of Coconino
Plug #6: 3000-2900' (100') 50 sks - across bottom of casing
10 sks at top of casing with well marker

Rig released at midnight.

SALERATUS #2-36 WELL
DRILLING HISTORY

Dec. 15: Drilled 0'. Finished DST #2. Came out of hole with test tools and laid down same. Finished at 0515 hrs. Went back in hole with drill string and bit to condition hole and mud for logging. Circulated for 4 hrs. and came out of hole. Rigged up Schlumberger at 1500 hrs. and began logging. Ran Dual Laterolog first. Sonde went to bottom (8450'). Ran Laterolog up to bottom of casing (2965') and then gamma ray (only) to surface. Then ran Gamma-Density-CNL log from T.D. up to 4000'.

Dec. 16: Drilled 0'. Finished running logs and rigged down Schlumberger. Decided to retest lower zone (based on logs) from 8410' to 8435'. Called tester. Waited 7 hrs on test tools. Johnston Testers arrived at 1400 hrs. Picked up test tools with 3 packers and went in hole with tools. Ran DST #3 as follows: (On bottom at 1915 hrs)

Interval: 8410-8435' (25')

Init Open: 15 min

Init Shut-in: 1 hr

Final Open: 1½ hr

Final Shut-in: 2½ hr.

Blow: Good blow immediate increasing to 13.5 ounces in 15 min. and steady at 14 ozs thru-out final flow period.

Rec: 3300' of salt water. Res = .07 ohms at 63°

Sample Chamber: 0.65 cu. ft. of gas, 2000 cc. of salt water
(Res = .07 ohms at 65°)

Pressures:

IHP = 4766#

FHP = 4741#

IFP = 209-471#

FFP = 483-1629#

ISIP = 3720#

FSIP = 3720#

BHT = 155°

Dec. 17: Drilled 8450' to 8525' (75'). Finished DST #3 laid down tools. Decided to drill ahead to McCracken due to favorable hydrocarbon shows to date. Went back in hole with Bit #19 and began drilling ahead at 1345 hrs. Drlg at rate of 7.3 ft/hr. in sucrosic dolomite.

Dec. 18: Drilled 8525' to 8736' (211'). Drlg at rate of 9.4 ft/hr. in sucrosic to sl. vuggy dolomite - some chalky - with scattered dull brown to gold fluorescence. No gas kick. Using 23,000# on bit at 60 RPM. Pump pressure = 1750# at 140 SPM. Mud wt = 10.6; Visc. = 37; W.L. = 4; oil content is 2%.

Dec. 19: Drilled 8736' to 8827' (9'). Drlg at rate of 7 ft/hr. in sucrosic dolomite. Est. top of Ouray formation at 8740' due to reverse drlg break and to more silicious material in the dolomite. Drilled to 8827' and lost pump pressure. Probable hole in pipe (Est about 62 stds down). Came out of hole and found hole in drill pipe on 63rd stand down. Removed joint and came out of hole to check drill collars and bit. Found 5 drill collars with old boxes and scoured shoulders. Laid down 4 collars picked up 3 re-tooled collars and put one collar with old box on top. Cut 100' off drlg line and went back in hole with Bit #12 (Reed FP53 RR)

SALERATUS #2-36 WELL
DRILLING HISTORY

soft line - 15 min to press. increase at 104 strokes per min. Started out of hole at 2000 hrs looking for washout. Drld 9½ hrs this date - rest for trips.

Dec. 11: Drilled 8248' to 8274' (26'). Didn't find washout. Went back in hole and had a pressure drop of 300#. Drilled to 8252'; pumped down soft line and came out of hole again. Found washout in tool joint in drill pipe - 10 stds above collars. Laid down two joints of drill pipe and went back in hole. Circulated gas out (74 units) and began drilling ahead at 1915 hrs.

Dec. 12: Drilled 8274' to 8341' (67'). Drlg at rate of 3 ft/hr. in lms. and dol. Est. top of Mississippian-Leadville at 8260'. (Top of Molas may have been at 8120'.) Had pump pressure drop of 300# at 8341' at noon. Came out of hole and found hole in drill pipe 6 stds above collars. Went back in hole and began drlg ahead at 1830 hrs. Had no trip gas. Had fluorescence and increased drlg rate at 8300' in wh. chalky lms. (good lt. blue fluorescence). Drlg at rate of 5.2 ft/hr. (No gas kick.)

Dec. 13: Drilled 8341' to 8434' (93'). Drlg in chalky to suc. lms and dol. at rate of 5-12 ft/hr. Had drlg break at 8341-61'. Good lt. blue fluorescence - slight cut. Had pump pressure drop of 250# at 8411' so came out of hole. Found a cracked box on collar in last std above bit. Laid down 2 collars and picked up a re-tooled collar. Cut drlg line. Went back in hole and began drlg at 2015 hrs. Had drlg break (14 ft/hr) at 8407' to 8433'. Had gas kick of 140 units. Had C₁ = 1.3%; C₂ = 2.01%; C₃ = 4%; and C₄ = 1.36%. Had free lt. yellow-brown oil on mud. Solid blue fluorescence in sucrosic to vuggy dol. w/ppp. Decided to run DST.

Dec. 14: Drilled 8434' to 8450' (16'). Circulated for 1½ hrs. and came out of hole to run DST #2. (Strapped out of hole - depth was 8451'.) Picked up test tools and went back in hole and ran DST #2 as follows:

Interval: 8292' to 8450' (158')

Init. Open: 15 min.

Init. Shut-in: 1 hr.

Final Open: 1½ hrs.

Final Shut-in: 2½ hrs.

Blow: Strong blow immediate - built to 5# in 15 min and to 45# at end of flow period. Increased continuously.

Rec: 7700' fluid (400' of mud and 7300' of slightly gas cut salt water w/resis = .07 ohms at 81°.

Sample Chamber: 700 cc. (650 cc. of salt water w/resis = .04 ohms at 68° and 50 cc. of mud.

Pressures:

IHP = 4728#

FHP = 4728#

IFP = 628-1577#

FFP = 1653-3627#

ISIP = 3627#

FSIP = 3640#

BHT = 158°

Remarks: Interval tested evidently included a water zone; so will log well and probably retest.

SALERATUS #2-36 WELL
DRILLING HISTORY

Final Open: 1½ hr.

Final Shut-in: 2 hr.

Blow: Strong blow immediate increasing to 45# on 1/8" choke in 15 min. Gas to surface in 25 min. (15 ft. flare). Gas flow increased to 58# on final flow and held steady. Gas is good rich gas.

Rec.: 1320 ft. fluid (1220' of highly gas cut mud and 100' of oil cut mud.) Most of mud came from initial opening of tool prior to packers setting.

Sample Chamber: 980# pressure; 9.7 cu. ft. gas and 100 cc. of oil cut mud.

Pressures:

IHP = 4390#

FHP = 4390#

IFP = 751#

FFP = 779#

ISIP = 2179#

FSIP = 1302#

BHT = 138°

- Dec. 4: Drilled 7720-7751' (31'). Finished running DST #1. Came out of hole with test tools and laid down tools. Went back in hole with Bit #18. Hit bridge at 7600'. Had lots of gas (530 units) in mud. Took over 1 hr to circulate out. Began drlg ahead at 1500 hrs. Drlg in anhydrite and black shale (116 units connection gas).
- Dec. 5: Drilled 7751' to 7854' (103'). Drlg in dolomite, blk shale, and anhydrite. Had slight drilling break at 7800' to 7830' in a granular sucrosic to sdy anhydrite with good lt. grn. fluorescence, slight stain and slight cut; but no gas kick. Drilled 23½ hrs this date.
- Dec. 6: Drilled 7854' to 7958' (104'). Drld 23 3/4 hrs this date at rate of 4.5 ft/hr in anhydrite, dolomite, and black shale. Drlg with 23,000# wt on bit at 60 RPM. Pump strokes at 148 and pressure at 1750#. Mud wt at 10.5, visc. at 37; w.l. at 14. Chlorides at 150,000 ppm.
- Dec. 7: Drilled 7958' to 8071' (113'). Drld 23¼ hrs this date, in sandy anhydrite, black shale, and dolomite. Had some prismatic salt at 7990' to 8010' and drld at a rate of 11 min/ft. The anhydrite at 7940-80' had scattered fluorescence, but no gas or cut.
- Dec. 8: Drilled 8071' to 8172' (101'). Drlg at rate of 4.5 ft/hr. Drld 23 3/4 hrs this date. Samples changed to mostly limestone with some dolomite at 8060'. This is the probable top of the Pinkerton Trail section.
- Dec. 9: Drilled 8172' to 8226' (54'). Survey at 8207' was 1°. Drlg rate decreased markedly at 8170' - drlg at 2.5 ft/hr in lms and dolomite. Had washout at 8226' at 1845 hrs. Drld 18 hrs and tripped 6 hrs for washout. Found washout in a cracked box in a drill collar. Bit #18 (Security S86F, #124344) made 506' (7720' to 8226') in 122 hrs. Drld at avg rate of 4 ft/hr.
- Dec. 10: Drilled 8226' to 8248' (22'). Went in hole with new bit after laying down 2 collars. Cut 85' off drlg line. Rearranged drill pipe to put hard-banded pipe below surface casing. Circulated out gas (125 units). Drld to 8248' and had drop in pump pressure and another washout. Pumped down

SALERATUS #2-36 WELL
DRILLING HISTORY

- Nov. 28: Drilled 7309' to 7379' (70') in 23½ hrs drilling. Drlg at avg. rate of 3 ft/hr in mostly amorphous to granular anhydrite, sucrosic dolomite with occasional thin beds (1' tp 2' thick) of black petroliferous shale. Had a 16 unit gas kick in blk shale bed at 7346' to 7347'. Wt. on bit is 25,000# at 65 RPM. Pump pressure is 1500# at 136 SPM. Mud wt is 10.4, visc. is 38, w.l. is 16.
- Nov. 29: Drilled 7379' to 7472' (93'). Drld 23 3/4 hrs at avg. rate of approx. 4 ft/hr in anhydrite, dolomite, black and red siltstone. Encountered salt at 7450' and drlg rate increased to 10 ft/hr. Increased pump pressure to 1850# and drlg rate increased from 2.5 ft/hr to 4 ft/hr. Bit #15 has 181½ hrs - 927 total feet at end of tower.
- Nov. 30: Drilled 7472' to 7610' (138'). Drld salt at 7568'; then anhydrite, dolomitic siltstone, and dolo. to 7580'. Had drlg break at 7580-85' (1½min/ft.) and then blk petro shale to 7610'. Had 400 unit gas kick from 7580' to 7595' (1 hr.) and then gradually decreasing to 100 units. No fluorescence or cut in samples. Had washout at 7610' so started out of hole. Encountered tight spot at 3170' and took several hours to work pipe thru tight spot. Laid down 20 jts of unbanded pipe.
- Dec. 1: Drilled 7610' to 7610' (0'). Worked 6½ hrs getting thru tight spot at 3120' to 3170'. Bit #15 was scoured and pitched. Two cones loose with bearings gone and most of the buttons. Bit #15 (Security S88F) made 1065' (6545' to 7610') in 201½ hrs. Drilled at an avg rate of 5.3 ft/hr. Picked up new bit (HTC J33) and went back in hole. Hit tight spot at 3120-70' and reamed and circulated for 5 hrs to clean out tight area. Ordered Globe basket, junk sub, and 8½" mill, in event needed. Came out of hole after reaming tight spot to check bit. Found Bit #16 was pinched and not useable. Put on tooth bit and went in hole. Reamed thru tight spot again quite easily. Reamed tight spot for 3 hrs.
- Dec. 2: Went to bottom to check for iron or cones lost previously. Found none. Had gas kick of 260 units. Came out and put on junk sub and went back in hole. Began drlg ahead at 1300 hrs. Drilled 7610' to 7669' (59'). Had drlg break at 7640' to 7654' sandy dolomite and anhydrite with blue fluorescence = 100 unit gas kick and brown oil stain. Had 375 unit gas when bottoms came up on trip.
- Dec. 3: Drilled 7669' to 7720' (51'). Had another drlg break at 7695' to 7710'. This was mostly salt but had 30 unit gas kick. Had sandy dolomite and anhydrite from 7710-20' with br. oil stain and fluorescence. Decided to test zone 7570' to 7720' (150') so circulated for 2 hrs and came out of hole to run DST. Ran DST #1 as follows:
- Interval: 7561-7720' (159')
Init. Open: 15 min.
Init. Shut-in: 1 hr.

SALERATUS #2-36 WELL
DRILLING HISTORY

- Nov. 21: Drilled 6557' to 6662' (105'). Drlg at rate of 4.4 to 6.7 ft/hr. Came partly out of hole to replace drill pipe (non hard banded) with hard-banded drill pipe below casing. Used unbanded drill pipe in casing to minimize wear. Went back in hole. Took 5 hrs to rearrange pipe in hole. Drilled in possible salt from 6580' to 6630' at rate of $4\frac{1}{2}$ min/ft; rest was anhydrite, dolomite, limestone, and black shale.
- Nov. 22: Drilled 6662' to 6739' (77'). Survey at 6715' was $\frac{1}{2}^{\circ}$. Drlg w/20-25,000# on bit at 60 RPM. Pump pressure = 1500 at 140 SPM. Mud wt is 9.9, visc. is 37, and w.l. is 16. (Gradually converting mud to salt base mud.) Chlorides are 55,000 ppm. Drlg in anhydrite, dol., and lms. at rate of $3\frac{1}{2}$ ft/hr.
- Nov. 23: Drilled 6739' to 6849' (110'). Encountered salt plus streaks of black shale and anhydrite at 6815'. Drlg rate increased to approx. 10 ft/hr. Loosing a little mud - probably about 5 bbl/hr. Drilled 23 $\frac{3}{4}$ hrs this date.
- Nov. 24: Drilled 6849' to 7056' (207'). Had mostly salt, black shale and v.f.g. calcareous sandstone to 7050'. Had 180 unit gas kick at 6870-80' in lt. gry sucrosic lms., scattered bl. fluor. Had 47 unit gas kick at 6930-40' in a black petro. shale. Survey at 6932' was 1° . Drlg w/20,000 to 25,000# on bit at 60 RPM. Mud wt. is 10.2, visc. is 36, w.l. is 22; chlorides are 120,000 ppm.
- Nov. 25: Drilled 7056' to 7172' (116'). Drlg in salt from 7095' to 7115'; rest is anhydrite, suc. dol. and lms., blk and red siltstone. Had 45 unit gas kick at 7075-80' in lt. gry., suc. lms. w/sl scat. blue fluorescence. Drld 23 $\frac{1}{2}$ hrs this date at avg rate of approx. 5 ft/hr.
- Nov. 26: Drilled 7172' to 7257' (85'). Survey at 7194' was $\frac{3}{4}^{\circ}$. Had washout in collars at 0700 hrs. (7194') so came out of hole. Found box in collar on 7th collar down cracked and washed out. Laid down two bad collars and 4 collars that had not been re-tooled and sent them to machine shop for retooling. Picked up 5 repaired collars and went back in hole. Rearranged drill pipe in string to keep unbanded pipe in casing. Began drilling ahead at 1730 hrs. Had 11p hrs drilling this date and 13 $\frac{1}{2}$ hrs. tripping and work with collars and pipe. Trip gas was 400 units.
- Nov. 27: Drilled 7257' to 7309' (52'). Drld real slow 3 to 4 ft/hr to 7307'. Lost 250# pump pressure - must be another washout. Started out of hole at 1700 hrs. Found cracked box in ninth collar down. Laid down 8th and 9th collars. Went back in hole with Bit #15 and began drlg ahead at 2300 hrs. Drlg at rate of 2 ft/hr in soft blk sh., anhydrite and dolomite. Trip gas kick was 350 units. Drld 17 $\frac{1}{4}$ hrs this date; and 6 $\frac{3}{4}$ hrs trip and laying down collars.

SALERATUS #2-36 WELL
DRILLING HISTORY

Still didn't have proper pump pressure. Drilled 6164' to 6176' with pump pressure still dropping so came out of hole again to check for hole. Found crack in 6th drill collar just below threads in box. Laid down 5th and 6th collars. Went back in hole. Began drlg ahead at 1430 hrs at rate of $7\frac{1}{2}$ ft/hr. Drlg rate decreased to 4.8'/hr. at 6227' to 6236'.

- Nov. 16: Drilled 6236' to 6305' (69'). Drlg slow in dolomite at rate of 3.4' to 5.2'/hr. Made rd-trip at 6287' for new bit. Bit #13 (Security S86F Ser. #124554) made 355' (5932' to 6287') in 64 $\frac{3}{4}$ hrs. Drilled at an avg. rate of $5\frac{1}{2}$ ft/hr. Reamed hole from 6227' to 6287'.
- Nov. 17: Drilled 6305' to 6395' (90'). Drilling in dolomite at rate of 2.6' to 4.8'/hr. Wt on bit is 25,000#; RPM is 60; pump pressure is 1500# at 140 strokes/min; mud wt. is 8.8, visc is 37, w.l. is 16, ph is 11.5, cake thickness is $\frac{1}{32}$, solids content is 4%. Sand content is 0.25%.
- Nov. 18: Drilled 6395' to 6447' (52'). Drill string parted at 0500 hrs at 6417'. Came out of hole and found string had parted at about 5700' (3 jts above the collars). Pin on bottom jt of drill pipe was washed. Picked up another jt of drill pipe and went back in hole and screwed into box at top of fish and came out of the hole. Laid down bad jts and went back in hole. Began ahead at 1430 hrs. Drlg at rate of 3.2 ft/hr.
- Nov. 19: Drilled 6447' to 6511' (64'). Drilled 6447' to 6507' at rate of 5 ft/hr. Lost pump pressure at 6507' at 1230 hrs. Pumped down soft line and came out of hole to find hole. Found hole (crack in bit sub at the bottom of the threads in the box). Put on different bit sub and went back in hole. Strapped in hole and revised depth from 6507' to 6499' (correction was 9'). Began drilling ahead at 1930 hrs. Drilled 6499' to 6511' at rate of 2.6 ft/hr in dense dark brown dolomite with slight oil stain.
- Nov. 20: Drilled 6511' to 6557' (46'). Drlg ahead at rate of 4.25 ft/hr. Lost pump pressure (300#) again at 0845 hrs at 6545'. Pumped down soft line and came out of hole. Found crack in drill collar at bottom of threads on box. Laid down 4 collars. Sent 5 collars plus bit sub into machine shop to be cut and threaded. Cut 94' off drlg line. Went back in hole with Bit #15. Bit #14 (Reed FP52 - #165140) made 258' (6287' to 6545') in 62 $\frac{1}{4}$ hrs. Drilled at avg. rate of 4 ft/hr. Drilling in dolomite and limestone of upper Hermosa.

SALERATUS #2-36 WELL
DRILLING HISTORY

drill collars. Laid 2 drill collars down. Went back in hole. Began drilling ahead at 1415 hrs. Drlg in limestone, dolomite, and some shale.

- Nov. 10: Drilled 5672' to 5806' (134'). Drlg at rate of 6 to 8 ft/hr. Had drlg break (2 min/ft) from 5745' to 5749'. Samples were sucrosic limestone with scattered blk residual oil - no fluor. or gas. Had drop in pump pressure again at 1930 hrs (5806'). Dropped soft line and came out of hole. Found another wash out in collars. Inspected each collar joint for possible future wash outs. Laid down 2 collars and 6 jts of drill pipe. Replaced drill pipe with hard-banded joints.
- Nov. 11: Drilled 5806' to 5872' (66'). Finished inspecting collars and replacing drill pipe. Went back in hole (0330 hrs to 0645 hrs). Circulated hole and began drlg ahead at 0800 hrs. Drlg at rate of 5.25 to 3.75 ft/hr. in dolomite, anhydrite, and soft red shale. Wt on bit at 25,000#; pump pressure at 1500# with 70 spm on each pump (140 spm).
- Nov. 12: Drilled 5872' to 5932' (60'). Drlg slow. Drlg at rate of 1½ ft/hr. from 5914' to 5917' (soft red sh). Drilled to 5932' and came out of hole to change bits. Bit #12 (Reed FP53 - Ser. #892617) made 731' (5201' to 5932') in 128 hrs. While out of hole, had all collars checked and magnafluxed. Found one bad pin on a collar and junk sub had a cracked pin. Laid down bad collar and sent junk sub back to DOTCO. Cut off 75' of drlg line and replaced 4 jts. of drill pipe with hard-banded pipe. Crown-o-matic was checked and found not working.
- Nov. 13: Drilled 5932' to 6046' (114'). Tripped in hole with Bit #13. Began drlg ahead at 0100 hrs. Drlg at rate of 3 to 6 ft/hr in shale, limestone, and dolomite. No. 2 pump down - replaced valves and seats. Pump pressure with #1 pump is 700# at 110 strokes: both pumps on grid 1200# at 70 strokes each. Drlg in Hermosa formation.
- Nov. 14: Drilled 6046' to 6164' (118'). Drlg at rate of 4 to 8½ ft/hr in limestone, dolomite, and black shale. Survey at 6103' was 1°. Had drop in pump pressure (300#) at 2030 hrs. Tried to check for hole in pipe without success. Checked surface equipment - all okay. Started out of hole at 2200 hrs. Didn't find any leaks or wash-outs. Had scattered specks and streaks of black, residual oil in sucrosic limestone and dolomite from 6110' to 6160'. No fluorescence or gas.
- Nov. 15: Drilled 6164' to 6236' (72'). Finished trip back in hole. Didn't find hole in pipe. Began drlg ahead at 0500 hrs.

SALERATUS #2-36 WELL
DRILLING HISTORY

- Nov. 1: Drilled 4522' to 4603' (81') in 15½ hrs. Tripping back to bottom (4½ hrs). Drilling at average rate of 5.3'/hr. Wt. on bit is 25,000# at 65 RPM. Mud wt. is 8.6, visc. is 39, and w.l. is 8. Lithology is 50% siltstone; 50% sandstone, and a trace of limestone. Background gas is 2 units.
- Nov. 2: Drilled 4603' to 4736' (133') in 17½ hrs. Drilling at avg. rate of 7.6'/hr. Mud wt. is 8.5, vis=34, w.l.=12. Wt. on bit is 25,000# at 65 RPM. Drilling in Coconino formation. Lithology is 70% sandstone; 10% reddish brn. siltstone, and 10% orange, very calcareous mudstone, and 10% chalky, friable, non-calcareous material; trace of buff tan limestone.
- Nov. 3: Drilled 4736' to 4840' (104') in 12½ hrs. Drilling at avg. rate of 8.3'/hr. Had a deviation survey at 4779' = 1°. Formation is Cutler Rico. Drilling in sandstone, siltstone, and mudstone. Trace of kaolinite and limestone. Drlg break at 4818' to 4835'. Accumulative Cost is \$425,770. ;
- Nov. 4: Drilled 4840' to 4976' (136') in 23 3/4 hrs. Drlg in Rico formation with 80% siltstone and mudstone; 20% sandstone. Formation gas = 3 units; Connection gas = 3 units; Background gas = 2-3 units.
- Nov. 5: Drilled 4976' to 5130' (154') in 23 3/4 hrs. Wt. on bit is 25,000# at 65 RPM. Accumulative cost is \$447,565.
- Nov. 6: Drilled 5130' to 5232' (102') in 17½ hrs. Drilling at 5.9'/hr. Wt. on bit is 25,000# at 65 RPM. Mud wt. is 8.5, visc. is 35, w.l. is 14. PSPM are 148 at 1500 psi. Accumulative Cost is \$462,925.
- Nov. 7: Drilled 5232' to 5327' (102') in 21 hrs. Drlg at rate of 6.2 ft/hr. Reamed 1 3/4 hrs back to bottom. Bit #11 (Reed FP52 made 405' in 72 hrs). Mud wt. is 8.5, visc. is 34, w.l. is 20. Had a deviation survey at 5201' which was 1°. Drlg in 80% dolomite; 10% limestone; 10% siltstone; and 2% oil in mud. Gas is 3-5 units.
- Nov. 8: Drilled 5428' to 5580' (152'). Drlg at rate of 6 to 7 ft/hr. in Hermosa sediments. (Hard quartzitic sandstone, limestone, and siltstone.) Wt. on bit is 25,000# to 30,000# at 60 RPM. Pump pressure is 1500# at 70 spm (each pump). Mud wt is 8.8, visc. is 38, w.l. is 10. Est. top of Hermosa at 5400'. Survey at 5501' was 1°. Checked BOP's and hydril (okey). Acc. has 3000#.
- Nov. 9: Drilled 5580' to 5672' (92'). Drilled to 0730 hrs (5625') and pump pressure dropped 300#. Checked all surface equipment - all okey. Suspect hole in pipe. Dropped soft line in drill pipe and pumped down - had slight increase in pump pressure. Came out of hole to check. Found wash out in

SALERATUS #2-36 WELL
DRILLING HISTORY
PAGE 4

Oct. 31: Drilled 4473' to 4603' (130'). Drlg in hard, white, tight, quartzitic ss. of Coconino. Had lots of torque at 4603' so came out of hole to check bit. Drlg with 25,000# wt. on bit at 60 RPM. Pump pressure at 650# to 1350# with one or two pumps respectively.

SALERATUS #2-36 WELL
DRILLING HISTORY
PAGE 3

- Oct. 25: Drilled 3537' to 3694' (157'). Fished for cones. Cut 6" core and came out of hole with Globe basket. Recovered several iron pieces, bearings, and one cone. Rig repair = 3/4 hrs (replaced clutch shoe). Went in hole with Bit #7. On bottom at 1730 hrs and drilling ahead at 9.1 ft/hr. in red sandstone and siltstone.
- Oct. 26: Drilled 3694' to 3800' (206'). Made rd-trip for new bit. SCR system broke down about 1/2 way out of hole. Worked on SCR for 1 1/2 hrs. Disconnected magnetic brake. Bit #7 (Security S33-04437) made 226' (3533-3759') in 27 3/4 hrs. Drlg at an avg rate of 8 ft/hr. Loaded out Globe basket and crossover subs. Hit crown with blocks due to SCR failure and had to repair angle-iron braces and check crown (rig repair = 4 1/2 hrs). Rig repair this date is 5 3/4 hrs. Began drilling ahead at 1945 hrs. Drlg in red siltstone and shale of Moenkopi formation.
- Oct. 27: Drilled 3800' to 4069' (269'). Survey at 3820' = 2°. Drlg with 25,000# on bit at 60 RPM. Pump pressure is 1300# at 74 SPM (both pumps). Drlg at rate of 11.5 ft/hr. Mud wt is 8.6#/gal; visc is 37, and w.l. is 20. Drlg in red sltst. and sh. of Moenkopi; had some sand and lt. brown limestone at 3905' - may be top of Kaibab.
- Oct. 28: Drilled 4069' to 4278' (209'). Survey at 4133' was 2°. Drlg. at rate of approximately 8'/hr. Drlg in Kaibab and Coconino. Est. top of Coconino at 4240', due to hd, tight, light tan to white f.g. sandstone. Had some tarry oil stain and residual in samples of sandy lms. and calcareous sand in Kaibab.
- Oct. 29: Drilled 4278' to 4381' (103'). Lost 300 bbl mud at 4278' and had to mix mud and LCM. Regained circulation and came out of hole to check bit. Bit #8 (Reed FP53-946775) was okey and in good shape so went back in hole with Bit #8. Conditioned mud and built volume (carrying 5% LCM). Drlg in had ss. at rate of 7.6'/hr. Wt. on bit is 25,000# at 60 RPM. Pump pressure is 550# at 1500 # pressure at 95 SPM, (one pump and 2 pumps). Pump pressure variation due to air in mud.
- Oct. 30: Drilled 4381' to 4473' (92'). Made rd-trip at 4473' to check bit. Bit #8 (Reed FP53-946775) made 714' (3759' to 4473') in 76.5 hrs. Drilled at an avg. rate of 9 1/3' per hr. Survey at 4473' was 1 3/4°. Laid down 22 jts of drill pipe and replaced with 22 jts of hard-banded drill pipe. Had to ream 36 ft. back to bottom. Drlg in Coconino.

- Oct. 19: Drilled 2965' to 3045' (80'). Drilling in sand and shale of Chinle formation at rate of 13.3 ft/hr. No surveys made this date. Drlg ahead with water and small amount of gel. Viscosity is 32, with 12,000# on tooth bit at 60 RPM. Pump pressure is 1200#. Bit has 12-12-15 jets at 80 SPM.
- Oct. 20: Drilled 3045' to 3133' (88'). Drlg with 8 3/4" used bit to 3117' and came out to check bit. Bit was worn so went in hole with new HTC-8 3/4" bit and hit tight spot in casing at 1152' (Must have a 40# joint in string); so came out and put on 8 1/2" bit. Went back in okay. Bit #5 (Reed 12-J RR) made 152' (2965' to 3117') in 16 1/4 hrs. Drilled at an avg. rate of 9 ft/hr. Survey at 3065' was 3 3/4°. Will keep wt. off bit until hole straightens up. Drlg ahead with new bit at rate of 14.4 ft/hr.
- Oct. 21: Drilled 3133' to 3387' (254'). Drlg ahead at rate of approx. 11 ft/hr. in red siltstone and shale of Moenkopi formation. Survey at 3240' was 2 1/2°; so increased wt. on bit to 20,000# at 70 RPM. with pump pressure at 1250# at 70 SPM.
- Oct. 22: Drilled 3387' to 3534' (253'). Drlg ahead at rate of 9.3 ft/hr. Survey at 3534' was 2 1/2°. Bit wouldn't drill after survey and connection so came out of hole. Found that all 3 cones were left in hole. Called DOTCO for Globe basket. Waiting on tools = 1 hr. Bit #6 (Varel VS37) made 417' (3117-3534') in 47 hrs.
- Oct. 23: Depth 3534'. Fishing for cones all day. Waited on tools for 6 hrs. Went in hole with Globe basket. Basket wouldn't go past 1120' so came out and ground down some guide rings on the basket; took 5 hrs. for this work. Went in 2nd time with basket and hole got real tight about 10 feet above bottom, so came out and picked up bit to ream bottom of hole out to size. Came out and picked up basket and went back to bottom. Washed over cones and cut 6" core in bottom of basket. Came out of hole with Globe basket.
- Oct. 24: Drilled 3534' to 3538' (4'). Finished trip out with basket. Recovered small pieces of cones but no full cones. Decided to try drilling ahead while waiting on new shoe for basket. Went in hole with Bit #7 and found cones and junk on bottom. Drilled 1/2 ft. and came out of hole to run basket again. Ran basket and recovered 1 1/2 cones plus bearings, and pieces of iron. Went back in with Bit #7 and drilled 2 1/2 ft. and found lots of junk on bottom yet; so came out and picked up basket again with new shoe. Went back in hole to fish for more cones.

SALERATUS #2-36 WELL
DRILLING HISTORY

- Oct. 14: Drilled 2147' to 2629' (482') in 23½ hrs. Survey at 2432' was 1 3/4°. Drlg. with 20-30,000# on bit at 60 RPM. Drlg in Wingate sand at rate of 20-21'/hr with water. Est. top of Wingate at 2175'. Loosing some water into formation.
- Oct. 15: Drilled 2629' to 2840' (211') in 23¼ hrs. Drlg at rate of 8-10 ft/hr. in sand and shale of Wingate and Chinle. Estimate top of Chinle at 2710'. Survey at 2732' was 3 3/4° so backed off wt. on bit to 15,000#. Loosing some water into sands. Chinle has some c.g. sands so must make sure we have penetrated these before setting casing. Replaced a swab in #2 pump and a swab and liner in #1 pump.
- Oct. 16: Drilled 2840' to 2965' (125') in 15 3/4 hrs. Drilled at avg. rate of 7½ ft per hr. in Chinle shale and sand. Mixed mud up to 50 viscosity and mixed in 10% LCM to condition hole and stop loss-circulation prior to running casing and cementing. Circulated hole for 8 hrs. Decided the 2965' was deep enough to cover all c.g. sands that might lose circulation.
- Oct. 17: Circulated hole and worked on mud for 4½ hrs and came out of hole to run casing. Bit #4 (Smith F-2) made 1536' (1429' to 2965') in 142½ hrs. Drilled at an avg. rate of nearly 11 ft/hr. Began running casing at 8 AM. Ran 73 jts (2970') of 9 5/8", 36.00#, K-55 casing and landed at 2965' K.B. Had guide shoe on bottom, float collar 40 ft. above shoe, and 5 centralizers. Cemented casing with 500 sks reg. cement with 3% CaCl. Didn't get returns but cemented top 50 ft. with 30 sks cement. Plug down at 11:30 P.M. Waiting on cement.
- Oct. 18: Waited on cement to set until 8 AM. Cut off casing and welded on casing head. Installed BOP, hydril, and kill-choke lines. Tested to 1500# - no leaks. Went in hole with 8 3/4" tooth bit. Found top of cement at 2921'. Drilled 8-ft and had problems with pumps (rubber and shale under valves). Tore down pumps three times to eliminate rubber under valves. Drilling ahead in shale.



MEGADON ENTERPRISES, INC.

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57 West South Temple • Salt Lake City, Utah 84101 • (801) 359-3575

DRILLING HISTORY ON SALERATUS #2-36 WELL NW.NW. SECTION 36-20S-14E. EMERY COUNTY, UTAH

- OCT. 4-6: Moving in and rigging up Republic Drlg. Co. Rig #9. Drilled to a depth of 538'. Wt. on bit is 15,25,000# at 90 RPM. Drilling with water. Made a deviation survey at 294' = $\frac{1}{2}^{\circ}$.
- OCT. 7: Drilled 538' to 769' (169') in 15 hrs. Wt. on bit is 20,000# at 90 RPM. Accumulative cost including rig move is \$61,900.
- OCT. 8: Drilled 769' to 931' (162') in 23 $\frac{3}{4}$ hrs. Drlg at avg rate of 8.7 ft/hr, Wt. on bit is 20-40,000# at 160 RPM. Bit #1 made 498' in 38 $\frac{1}{4}$ hrs. (12 $\frac{1}{4}$ " Security Bit). PSM is 100 at 200#. Deviation survey at 844' was $\frac{3}{4}^{\circ}$.
- OCT. 9: Drilled 931' to 1106' (175') in 20 $\frac{1}{4}$ hrs. Drlg at avg rate of 8.16 ft/hr. Made a rd-trip for new bit. Bit #2 (Security M4M) drld 445' in 58 hrs. (7.67'/hr). Wt. on bit is 20-40,000# at 90 RPM. Deviation survey at 988' was $\frac{3}{4}^{\circ}$. Accumulative cost is \$84,450.
- OCT. 10: Drilled 1106' to 1357' (251') in 23 $\frac{3}{4}$ hrs. Wt. on bit is 30,000# at 60 RPM. Drilling with fresh water with gel sweep. Pump pressure is 400 psi.
- OCT. 11: Drilled 1357' to 1600' (243') in 23 hrs. Drlg at avg. rate of 10.6'/hr. Made rd-trip for new bit. Bit #3 (Smith F-2 RR) made 492' in 49 $\frac{1}{2}$ hrs. Wt. on bit is 30,000# at 60 RPM.
- OCT. 12: Drilled 1600' to 1847' (247') in 23 $\frac{1}{4}$ hrs. Drlg at rate of 10.1 ft/hr. Wt. on bit is the same. PSM is 110 at 450 psi. Deviation survey at 1574' was 2 $\frac{3}{4}^{\circ}$. Accumulative cost is \$116,750.
- OCT. 13: Drilled 1847' to 2147' (300') in 23.25 hrs. Survey at 1827' was 2 $\frac{1}{2}^{\circ}$ and at 2132' was 2 $^{\circ}$. Drlg at avg. rate of 13 ft/hr with 20,000# on bit at 65 RPM. Drilling with water. Pump pressure is 750# at 75 SPM. Est. top of Kayenta at 2065'. Drilling mostly in tan, c.g. sand of Navajo.

GEOLOGIC EVALUATION
OF
SALERATUS #2-36 WELL

1. The Saleratus #2-36 well was drilled to 9184' and bottomed in siliceous gray shale, pink limestone and gray dolomite which was probably Lynch or Bowman-Hartman formation of Cambrian Age. Both the potentially productive Leadville and McCracken formations at the bottom of the hole were drilled and checked. Neither one appeared capable of production in the subject well. The Leadville formation of Mississippian Age was topped at 8236' and the upper portion was chalky, sucrosic limestone containing some specks and coatings of black residual oil and had scattered blue fluorescence. Portions of the upper section also had gas readings up to 140 units. Accordingly, the section from 8292' to 8450' was drill-stem-tested and about 7300' of salt water were recovered in 1½ hours. The usual dolomite porosity zone in the Leadville was encountered at 8310' and was thus included in the above drill-stem-test. The anticipated reef zone in the upper Mississippian was not encountered in this well. Apparently, this zone which was found in the Toledo #1 well in Section 33, T 20S, R 14E, ~~to~~ about 7 miles to the north was fairly local in extent or is located either west or east of the subject well. Since the Saleratus well was located south of the Little Grand Fault and the Toledo #1 well was north of this fault, it was expected that the subject well would be structurally lower since the Little Grand Fault is a young reverse fault and upthrown on the north side. It was found that the Saleratus well was approximately 1030' lower structurally. It is possible that the well was located on the south flank of the structure which trends east-west, since the displacement on the Little Grand Fault has been found previously to be about 780'. Accordingly, the reef zone found in the Toledo well in the Leadville could be located farther north. The show of oil found in the Leadville in the subject well was almost exactly the same as found in the Toledo well; thus suggesting the possibility that the wells were located on opposite flanks of the structure and that the hydrocarbon accumulation, if present, is somewhere between the wells.
2. Since the hydrocarbon shows found in the Leadville were so encouraging before being tested, it was decided that the McCracken (Devonian) formation could be productive, so the well was drilled an additional 650' (8450' to 9100') deeper. The McCracken was a dense, tight, quartzitic sand with scattered yellow (dead) fluorescence and carried only 14 units of gas. Accordingly, it was deemed non-productive and was not tested or logged.

3. In addition to the hydrocarbon shows in the Leadville, other shows were obtained in the Desert Creek section and in several different zones in the Paradox salt section. Unfortunately, the shaker was by-passed when the Desert Creek section was drilled due to a trip and hole in the drill pipe and so the samples thru this zone were very poor and the gas detector was by-passed. The electric logs, however, show a potential zone of dolomite with high porosity (8-15%) streaks (could be fracturing) with some gas effect. The samples indicated dense crystalline dolomite with oil stain but no fluorescence. A 10-ft zone in the dolomite at 6500' was washed out and could be a highly fractured zone. There is thus some indication that this could be a potentially productive zone.
4. The first clastic zone in the Paradox salt section which had significant hydrocarbon shows was at 6880' to 6935'. The samples were sandy anhydrite, siltstone and petroliferous shale with scattered blue fluorescence with 180 units gas. The E-logs suggest porosity of 10 to 14% and show some gas effect. The logs also suggest water saturations from 40 to 60% thru this zone. This is probably the most favorable zone in the clastics and could be productive in a future well. It was not possible to test this section when drilled due to the lack of packer seats. The hole was washed out beyond 13 inches and thus would have resulted in a misrun.
5. The next clastic zone encountered with favorable hydrocarbon shows was at 7110' to 7190'. This zone contained sucrosic limestone, dolomite, siltstone, and black petroliferous shale with some black residual oil, but no fluorescence. Gas kicks up to 135 units were obtained thru this zone; but the evidence didn't justify testing when drilled. The E-logs indicate porosities of about 8% or less; but do show some gas effect. This is a marginal zone but could be important in another location.
6. A clastic zone at 7570' to 7700' had some good hydrocarbon shows. The samples contained black petroliferous shale with strong gas odor; sandy to granular anhydrite, sucrosic dolomite with fluorescence, some oil stain, and had up to 400 units of gas. This zone was drill-stem-tested and gas to surface was obtained in 25 minutes and gauged at 25 MCFPD on 1/8" choke. 800' of gas cut mud and 100' of oil cut mud were recovered. The shut-in pressure, however, decreased from 2179# to 1302# during the test, suggesting a limited or highly damaged reservoir. The E-logs indicated thin beds of 8% to 20% porosity with about 20% water saturation. Thus this zone could definitely be potentially productive in future wells in the area.
7. The base of the salt and top of the Pinkerton Trail section was encountered at 7770'. The salt section in this well was much thinner than anticipated, but the top of the salt was about 300 feet lower than predicted. The Pinkerton Trail section and Molas were also thinner than predicted, so the top of the Leadville was approximately 1000 feet higher structurally than predicted.

8. It is concluded that the Saleratus #2-36 well definitely established the favorable nature of the Saleratus unit for possible hydrocarbon production and probably supported the suspected presence of an older structure (lower Pennsylvanian and older) in the area. Unfortunately the reef zone in the upper Mississippian was not encountered but good shows, including free light yellow-brown oil plus salt water were obtained. It is quite possible that a position farther north and east could be more favorable. Since this is a large federal unit area and due to the encouraging shows obtained in the Saleratus #2-36 well, another well on the unit is certainly justified.

W. Don Quigley

W. Don Quigley
Consultant

AAPG Cert #1296

APGS Cert #3038

DESIGNATION OF OPERATOR

The undersigned is, on the records of the Bureau of Land Management, holder of lease

DISTRICT LAND OFFICE: Utah State Lands
SERIAL No.: ML-28293

and hereby designates

NAME: MEGADON ENTERPRISES, INC.
ADDRESS: 57 West South Temple, Salt Lake City, Utah 84101

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable):

Township 21 South, Range 14 East, S.L.M.
Section 36: NW $\frac{1}{4}$


It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

POOL OIL & GAS

By



Thomas A. Pool, General Partner

309 Guaranty Bank Bldg., 817 17th Street
Denver, Colorado 80202

September 16, 1981

(Date)

(Address)

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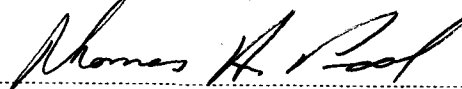
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POOL OIL & GAS

By



(Signature of lessee)
Thomas A. Pool, General Partner

309 Guaranty Bank Bldg., 817 17th Street
Denver, Colorado 80202

(Address)

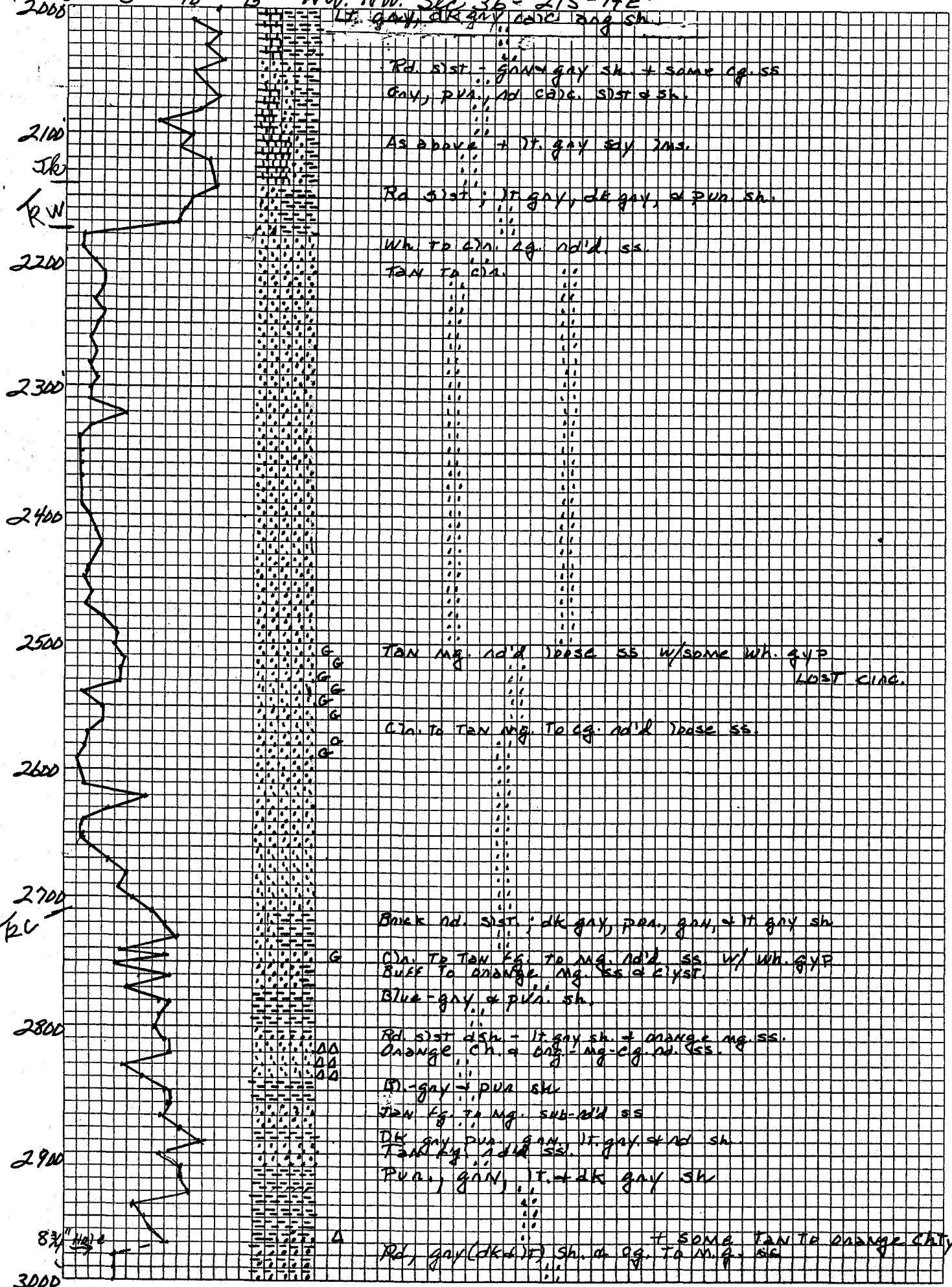
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Rd silt & sh.

+ some gray & pur sh.

bnw. nd sh.

lt gray, dk gray calc silt & sh + nd sh. + rd wh. ang. ss.
+ pur sh.

lt gray fg calc. ss.
tan fg. nd'd ss.

reddish fg. ang ss
W/lt. bnw clyst

+ nd sh.

+ gray, pur. & gray sh.

lt. gray; pur, dk gray & gray ss. calc. sh.

tan cg. nd'd ss.

+ some gray & gray sh.

tan to reddish mg. nd'd ss

+ sh

+ lt. gray - bnw ang sh

tan cg. nd'd ss

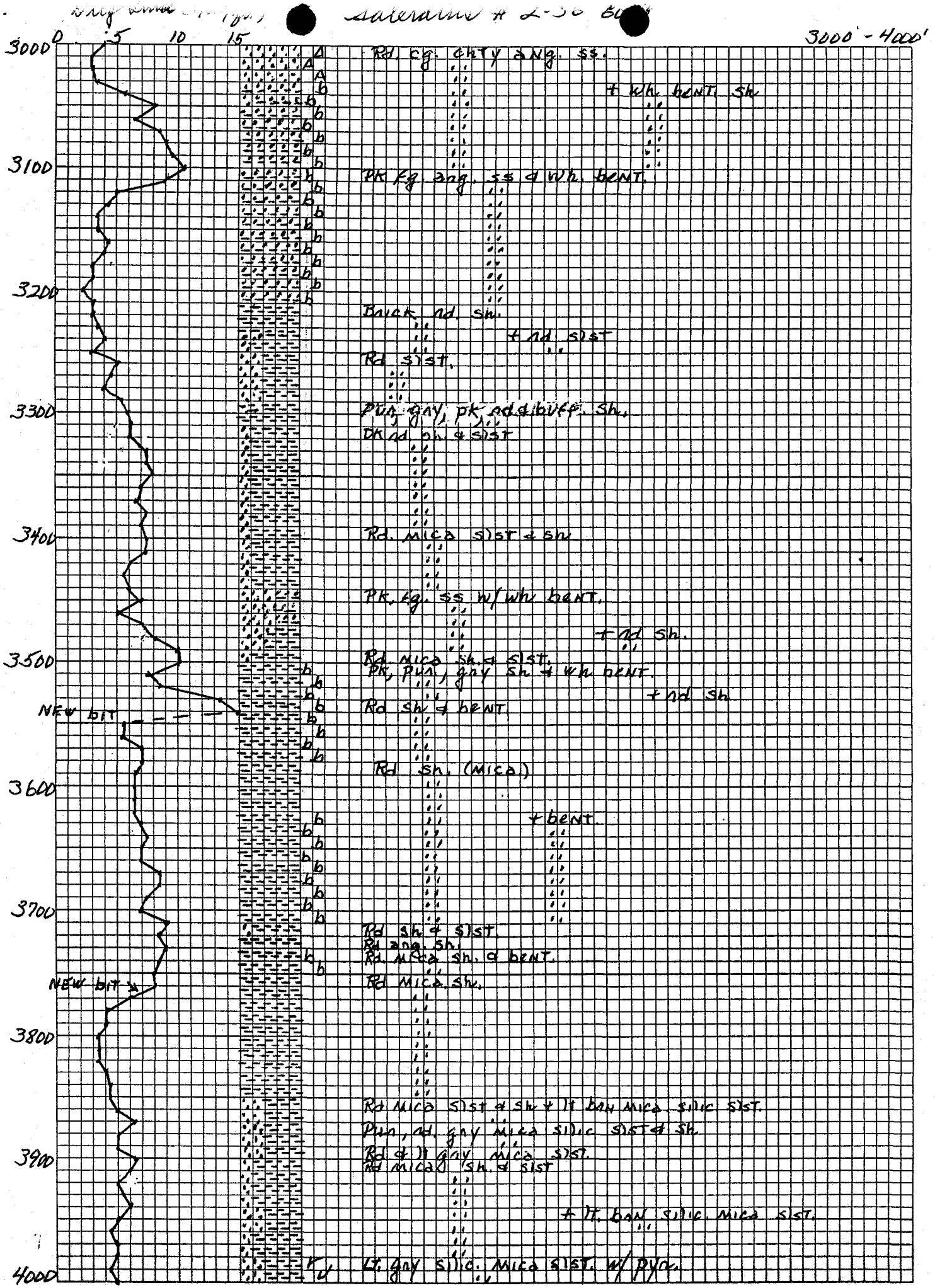
Rd mg. ang. ss + gray & gray sh.

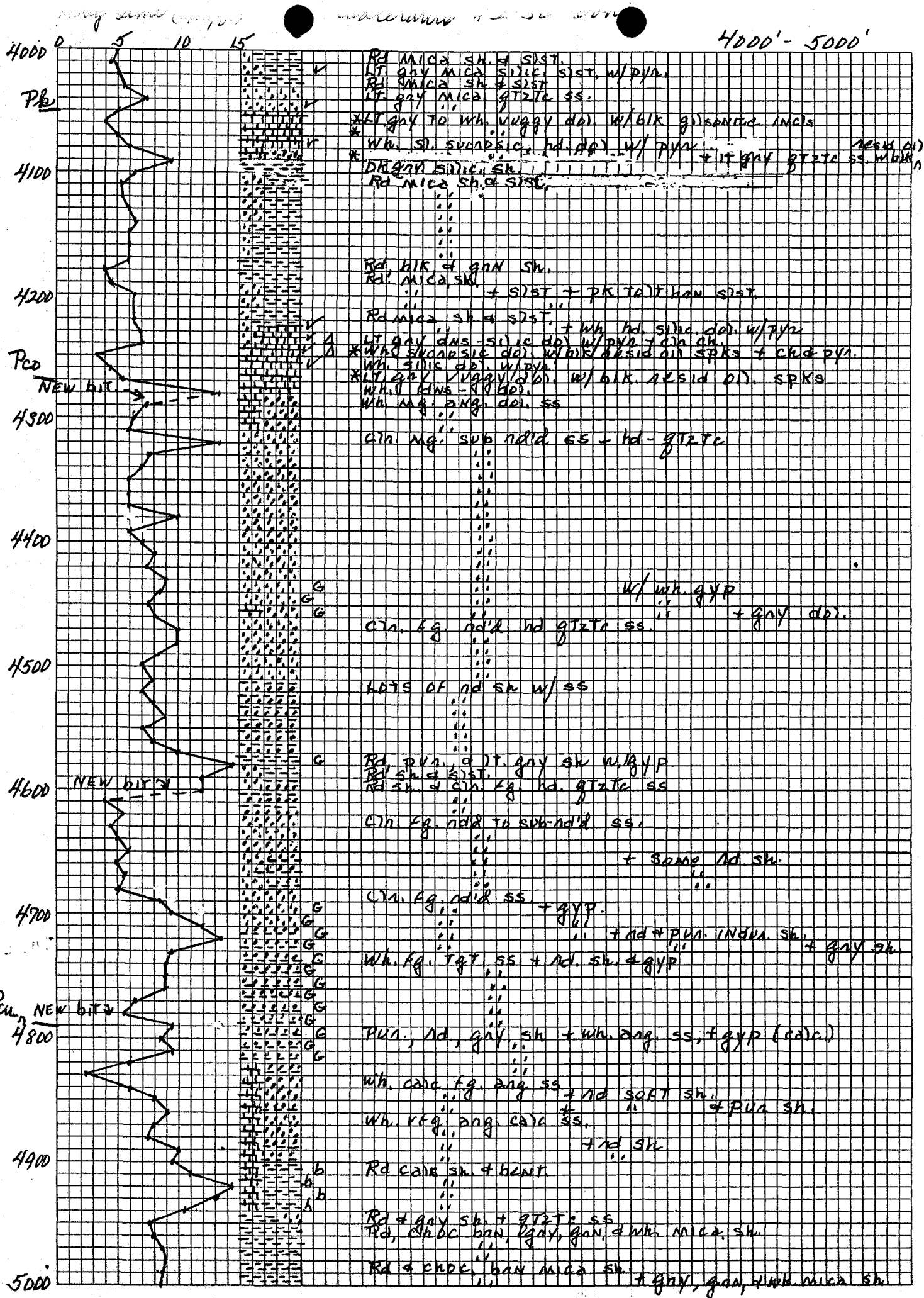
+ nd sh.
+ rd sh.

lt gray & pur, calc. sh.

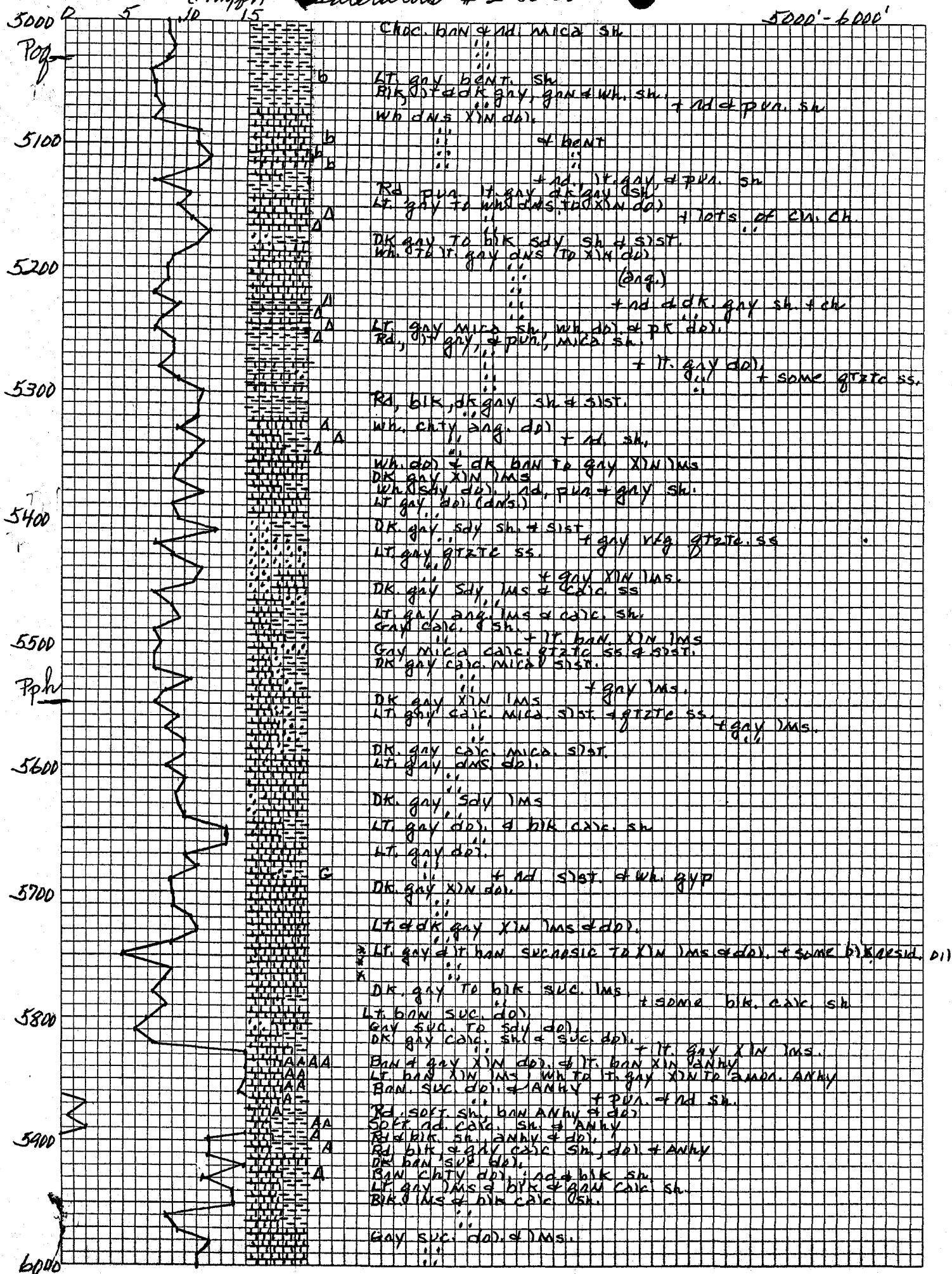
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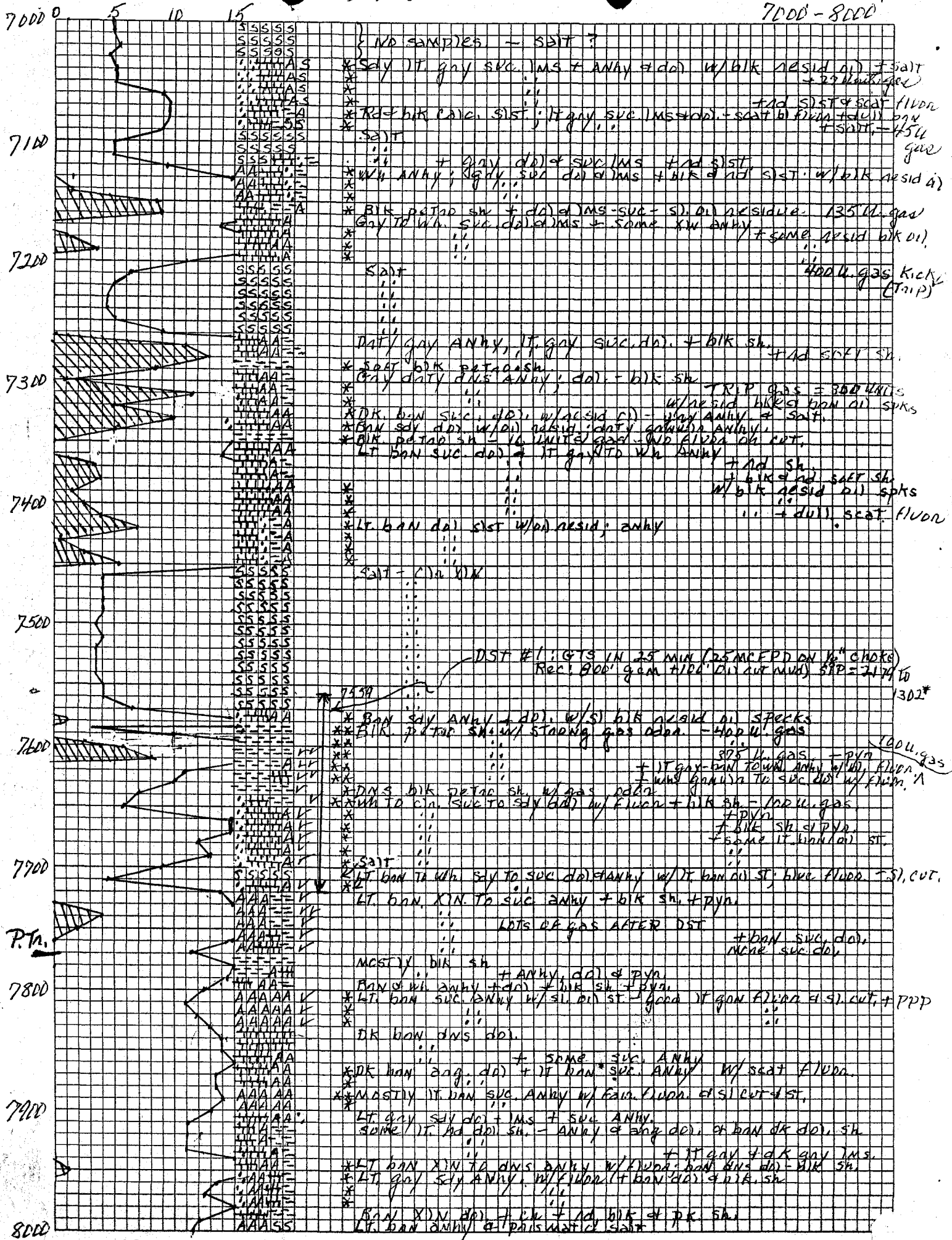
K&E 5 X 5 TO 1/2 INCH • 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.

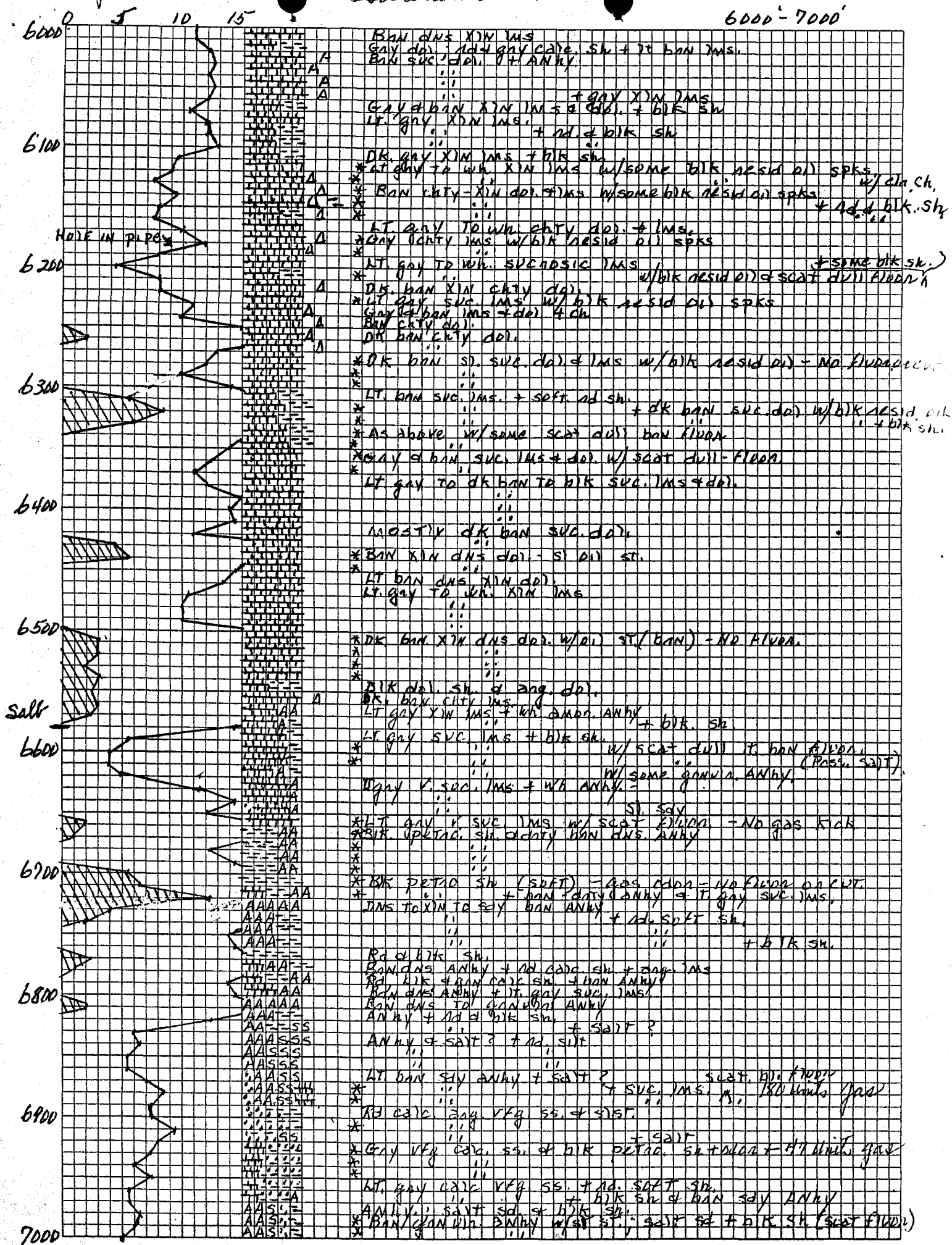




Lateral # 2-36 Cont







9-331 C ADDENDUM
Megadon Enterprises
Saleratus #2-36 Well
Section 36-21S-14E
Emery County, Utah

1. SURFACE FORMATION: Mancos ELEVATION: 4503' K.B.

2. ESTIMATED FORMATION TOPS:

Mancos	Surface
Dakota	200'
Cedar Mountain	300'
Morrison	400'
Summerville	900'
Curtis	1050'
Entrada	1300'
Carmel	1650'
Navajo	1780'
Kayenta	2420'
Wingate	2500'
Chinle	2750'
Shinarump	3000'
Moenkopi	3100'
Kaibab	3650'
Coconino	3790'
Cutler-Rico	4300'
Oquirrh	4550'
Hermosa	5030'
Desert Ck	6180'
Paradox Salt	6280'
Pinkerton Trail	8680'
Molas	9150'
Mississippian-Leadville	9250'

3. ESTIMATED DEPTH AT WHICH OIL, GAS, WATER OR OTHER MINERAL BEARING ZONES ARE EXPECTED TO BE ENCOUNTERED:

Potential Oil Zones: 3650' - Kaibab
6180' - Desert Creek
6900-8500' - Paradox Clastics
9250-9500' - Mississippian-Leadville

4. CASING PROGRAM AS PER FORM 9-331C

5. PRESSURE CONTROL EQUIPMENT:

A: After surface casing is set, a casing head, Series 9.00, will be mounted on top of the casing and a blowout preventer with hydraulically operated blind and pipe rams, and a hydrill will be mounted on the casing head.

B. Fill and kill lines will be connected thru a manifold to the casing head below the blind rams.

C. The BOP, hydril, and surface casing will be tested to 2000# for leaks before drilling out cement plug.

6. MUD PROGRAM:

- A. Will us mud and water to drill surface casing down to approximately 2800'.
- B. Air from 2800' to 6200'.
- C. Salt Base Mud 6200' to Total Depth (10.4#/gal.).

7. AUXILIARY EQUIPMENT:

- A. Air compressors and boosters for air drilling with rotating head and 125' of blowie line.
- B. Kelly cock in celly and float valve in bottom of drill collars.
- C. Safety valve for drill pipe and collars will be kept handy on the floor at all times.

8. CORING, LOGGING, TESTING PROGRAM:

- A. No coring is anticipated.
- B. Gamma-Dual-Laterolog (TD-Surface)
- C. Gamma-Density-CNL (TD-5000')

9. ABNORMAL CONDITIONS:

- A. No abnormal pressures or temperatures are expected.
- B. No hazardous gases such as H_2S are expected.
- C. Fresh water flow in Wingate will be cased off.
- D. While drilling with gas or air, return fluids will be directed through the blow line to the reserve pit. All open fires or ignition sources will be prohibited on location while gas or air drilling. A pilot flame will be maintained at the end of the blow line (located 125' from the wellhead) to insure burning of return gases that are combustible.

10. ANTICIPATED STARTING DATES:

Start location construction:	Sept. 10, 1981
Spud Date:	September 15, 1981
Complete Drilling:	November 15, 1981
Completed, ready for pipeline:	December 15, 1981

11. Productive zones will be perforated, tested and treated as necessary. Gas will be flared during testing. Produced water will be contained in the unlined drilling reserve pit. The extent of treatment of a zone (acidizing and/or fracing) can only be determined after the zone has been tested. A completion program will be furnished after drilling and logging.

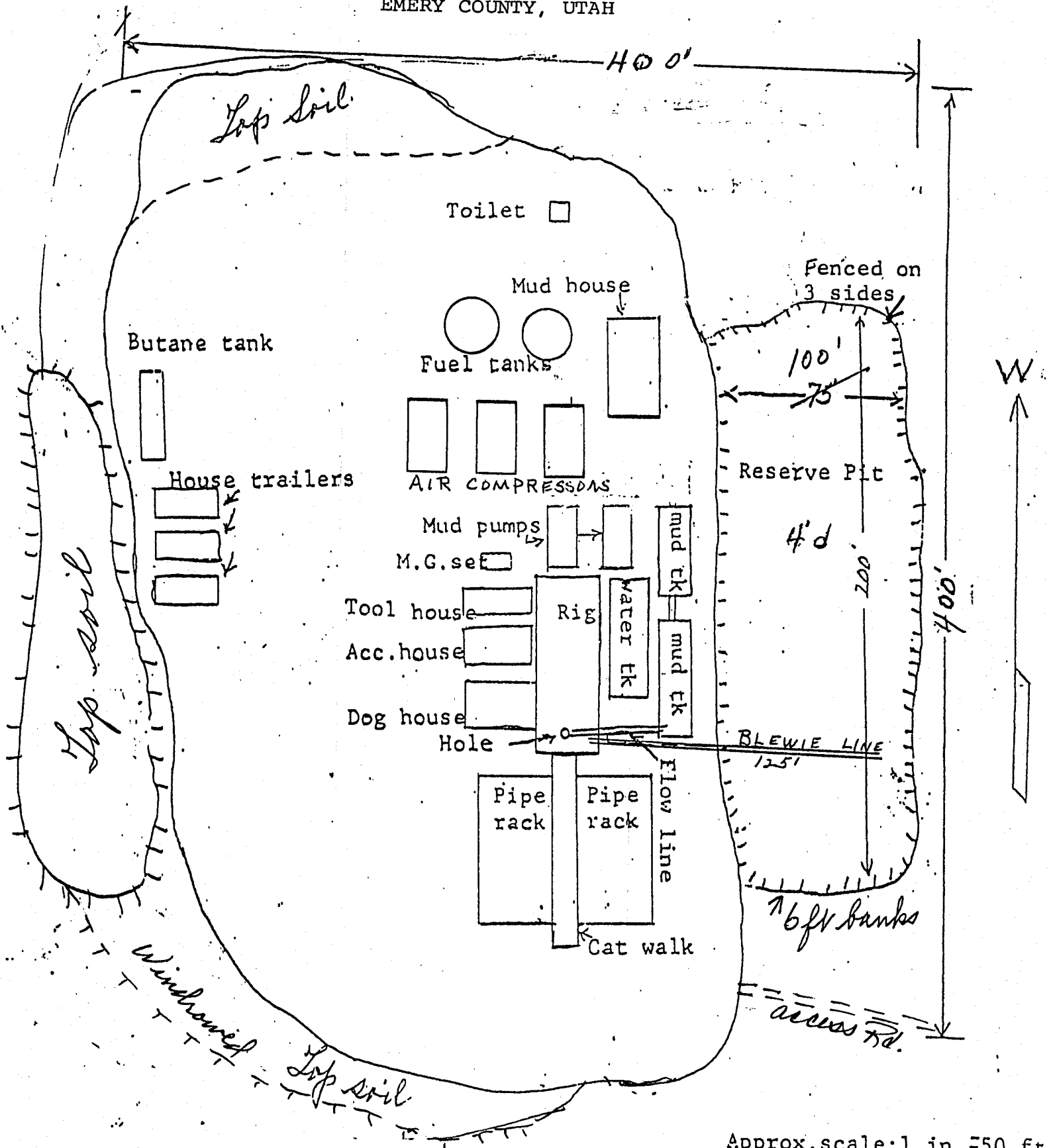
LOCATION PLANS FOR
MEGADON ENTERPRISES, INC.
STATE #2-36 WELL
NW. NW. SECTION 36-21S-14E.
EMERY COUNTY, UTAH

1. A survey plat (Plat #1) is attached showing the location of the proposed well site. Map #1 shows the route from Hwy 6 & 50 to old Hwy. 24, and then to the left at the cross road and on to location.
2. Access route to location is shown on the map and colored in red.
3. All present wells and dry holes in the area are shown on Map #1.
4. See 1 and 2 above for other roads in the area.
5. A plan for the location of the production equipment at the well site, if the well is successful, is shown on Plat #2. Since this well is a wildcat well, it is uncertain as to the type and location of the production, but it should be an oil well completed in the Mississippian formation, and should flow, thus eliminating the need for a pump jack. The flow lines, heater-treater, tank battery, and fluid pit will be installed as shown.
6. Water for drilling purposes will be obtained from either Saleratus Creek or the Green River. The source selected will depend on water availability and road conditions; Saleratus Creek is the preferred source due to its proximity.
7. A plan for the placement of the drilling equipment to be used in the drilling of the proposed well is shown on Plat #3. This plat shows the reserve pit. Excess drilling mud and waste water will be deposited in the reserve pit during drilling operations. The waste and burnable material will be put in a burn cage. At the completion of the well the pit will be folded-in and levelled as soon as the fluids permit.
8. See location of house trailers on Plat #3.
9. There are no airstrips and none planned.
10. See Plat #3 for the drilling equipment layout.
11. The location and access road is located on a gentle, rolling Mancos surface. Vegetation is sparse and comprised of sagebrush, cacti, shad scale, and some native grasses. Fauna include various small mammals and birds. After the well is completed, the location will be cleaned and levelled and the pit covered.
12. The I-70 freeway is about 1/3 mile south of the proposed location. The reserve pit will be dug at least $\frac{1}{2}$ in native rock and soil. No ranching or cultivation are present in the immediate area.

Plat # 2

ILLING EQUIPMENT LAYOUT
FOR

SALERATUS #2-36 WELL
NW. NW. SECTION 36-21S-14W.
EMERY COUNTY, UTAH



Approx. scale: 1 in. = 50 ft

PLAT NO. 3

WELL CONTROL EQUIPMENT FOR
SALERATUS #2-36 WELL
NW. NW. SECTION 36 - 21S-14E.
EMERY COUNTY, UTAH

The following control equipment is planned for the above designated well:

SURFACE CASING:

- A: Hole size for the surface casing is 12 $\frac{1}{4}$ ".
- B: Setting depth for surface casing is approximately 2000'.
- C: Casing specs. are: 9 5/8" O.D, J-55, 36.00#, 8-rd thread, new or used.
- D: Anticipated pressure at setting depth is approximately 1000 lbs.
- E: Casing will be run and cemented with 600 sks of cement and with returns to the surface.
- F: Top of casing will be at ground level.

CASING HEAD:

- A: Flange size: 10", API,
- B: Pressure Rating: 3000#; Series 900; Cameron, OCT, or equivalent; new or used; equipped with two 2" ports with nipples and 2", 3000# W.P. valves. Casing head and valves will be set above ground.

INTERMEDIATE CASING:

- A: None

BLOWOUT PREVENTERS:

- A: Double Rams: Hydraulic; one set of blind rams for 4" drill pipe; 10" flange; 3000# W.P; Series 900; equipped with mechanical wheels and rod for back-up; set on top of casing head and bolted down securely; pressure tested for leaks up to 2000#; Cameron, Shaffer, or equivalent. A hydril and rotating head will also be used.
- B: Fill and Kill Lines: To be connected to the 2" valve in the casing head and are to be heavy duty line pipe or tubing. The kill line will be connected to the mud pump and the flow line will be directed into the reserve pit.

AUXILLIARY EQUIPMENT:

- A: Float Valve: 3000# W.P; to be used in the bottom drill collar at all times.
- B: Kelly Valve: At least 3000# W.P; will be installed in the stand

pipe and a valve with proper sub will be available for stabbing in the drill pipe or drill collars.

ANTICIPATED PRESSURES:

- A: Shut-In Pressure: The Mississippian formation at a depth of about 8300' has been recorded at about 3500#, in the Salt Wash Field. This will be the pressure that will be considered in the control program for the mud.

DRILLING FLUIDS:

- A: Normal Mud or Air: Will be used to drill the well down to the top of the salt section of the Paradox Formation, which is expected at a depth of about 6300'.
- B: Salt Base Mud: At a depth of about 6400', the fresh water mud or air will be converted to salt base mud to prevent wash-outs in the salt section. This will also give a mud weight of over 10#/gal which will provide for a hydrostatic pressure of about 4600# at 8000', which should be sufficient over balance to hold the pressure of the potential reservoir at this depth.
- C: Toxic Gasses: None are anticipated.

PRODUCTION CASING:

- A: Production Casing Hole Size: 8 3/4"
- B: Setting Depth: Approximately 9500' which should be about 300' into the Mississippian formation.
- C: Casing Specs: 5 1/2" OD; N-80^{25.4#} for lower 3000', 17.00# for the upper 6000', K-55, R-3.
- D: Cementing: Csg. will be run and cemented with approx. 1000 sks in stages. The bottom of the casing, from 9500' to 7500' will be cemented first with about 600 sks, this will be allowed to set and then the rest of the cement will be used to cement the salt section. This will prevent undue hydrostatic pressures on the production zone. After the cement cures the casing will be set on slips in the casing head. Tubing, 2" OD, will be run, plugs will be drilled out, tubing will be set in tubing head which is securely bolted to the casing head, and then the well will be perforated under a water cushion at the proper intervals.
- E: Production Casing Pressures: Pressures involved in the production casing should not be greater than 3500# in the Mississippian formation at about 9500' and about 3900# in the Pennsylvanian-Paradox formation at 6000' to 8500'.

SCHEMATIC DIAGRAM OF CONTROL EQUIPMENT FOR THE

SALERATUS #2- 36 WELL
NW NW. SECTION 36-21S-14E.
EMERY COUNTY, UTAH

